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JANUARY-MARCH 1975

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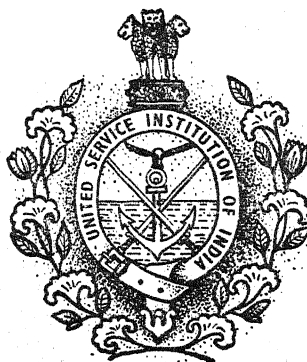
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NOTE

The views expressed in this Journal are in no sense official and the opinions of contributors in their published articles are not necessarily those of the Council of the Institution.

In the midst of cynicism, he conceived a planned steel city today called Jamshedpur.

In a dark age of India, he founded, at Bangalore, the Indian Institute of Science. The Institute has contributed to the latest technological breakthroughs of the country.

Tempered with such a spirit, the spirit of a pioneer, our Company never grows old with the years.

It only grows with the times.

Jamsetji Nusserwanji Tata
Born: 3rd March 1839

The Spirit of Steel



TATA STEEL

STRATEGY IN THE EIGHTIES

SQUADRON LEADER K.S. TRIPATHI

THE strategic scenario is changing dramatically. The enemies of yesteryears are emerging as friends. The strategy of confrontation has yielded place to the philosophy of detente—"philosophy" because the world leaders today talk in the strain in which only Jawaharlal Nehru used to in the fifties and for which he was called, an impractical visionary. The bi-polar world structure of the quarter of a century following World War II is becoming multi-polar. China vociferously denies that it is a super power or that it has any hegemonistic ambitions. It identifies itself with the third world—the developing world. The Soviet Union is passionately advocating the cause of detente and peaceful coexistence. The nightmare of the frustrating Vietnam war continues to haunt the United States. The Americans are no longer willing to "pay any price, bear any burden, meet any hardship, support any friend, oppose any foe in order to assure the survival and success of liberty".* Since Kennedy gave this inspiring commitment to his countrymen, the world has vastly changed. Hardly had a decade passed when President Nixon sounded an entirely different note. He said, "the time has passed when America will make every other nation's conflict its own or make every other nation's future our responsibility or presume to tell the people of other nations how to manage their own affairs." The Dullesian arrogance of power and the Kennedian global commitment to the cause of democracy were replaced by what came to be known as "shuttle diplomacy" of Henry Kissinger. The corner stone of President Ford's foreign policy continues to be promotion of the concept of detente, and one of the first things he did shortly after assuming office was to fly over to Vladivostok in U.S.S.R. to hold talks with Brezhnev and sign an agreement proposing limitation of strategic weapons. Donning the mantle of peace the world leaders today move around de-fusing tension and building bridges of peace and economic cooperation.

A NEW SOURCE OF POWER

A new source of power is emerging rapidly. Power no longer grows only out of the barrel of a gun but also out of a barrel of crude oil and

* John F Kennedy's Inaugural speech.

crates of finished products a nation is able to sell. Napoleon once dismissed Great Britain as a nation of shopkeepers but today shopkeeping has become such an attractive and zealously guarded preoccupation that France continued to debar Great Britain for years from membership of the European Economic Community. Industry and trade are emerging as new sources of political power. Greater the industrialization of a country, greater is its political power and greater its trade balance, more is its influence in international affairs. It is not that the idea of political power growing out of economic power is a new development, for Great Britain's East India Company carved out a huge empire out of its trading enterprise in India, but trade has of late acquired a new respectability. No longer does any one contemptuously refer to an economically prosperous country as a nation of shopkeepers.

New centres of power have emerged and these centres do not necessarily have big guns to buttress their power structure. Their power is based mainly, and in some cases even exclusively, on their economic strength. The emergence of Japan as economic giant, wielding vast influence in international affairs—almost solely due to its trade—is a modern development. Japan, no doubt, has a department of Defence, but if its defence forces were to determine Japan's place in the comity of nations, it would not be able to claim even a back seat. Similarly, the members of the European Economic Community (EEC) have jointly emerged as another centre of power and they derive their strength not from their armed forces—but from their mutual economic relationship and trade. The emergence of EEC is a significant development for several reasons. First, it is remarkable that nine West European countries sank their traditional differences—some of them tinged with memories of bitter hostilities spread over centuries—and agreed to constitute a common arrangement for economic co-operation, marketing of products and entering into joint trade relationship with other countries. This arrangement signifies the triumph of common economic interests over narrow national considerations and it is politically as important as it is economically a model for other countries to follow. Secondly the economic cooperation among these countries is, ipso facto, a guarantee against an outbreak of armed hostilities among the members and the vast sums of money which would otherwise have gone into building up defence forces against each other, would now be spent, one hopes, for greater industrialisation, more productivity and improving the general living standards of their peoples. Thirdly, instead of frittering away their resources in penny pockets of industrial development for their own individual purposes, the EEC nations can now avoid duplication and waste and develop mutually complementary rather than competitive industries. Scarce resources and raw materials could now be pooled to build up a

balanced industry. EEC will also have a much better collective bargaining position vis-a-vis other nations and it is precisely this which gives them enormous power politically.

OIL AS A WEAPON

Another significant development has been the rise of the West Asian countries as a group of oil producing and exporting countries after the October 1973 Arab Israeli conflict. The countries of West Asia suddenly realised the importance of their oil and in an unprecedented show of unity rose as a body to use oil as a weapon of war and diplomacy. The world which had got used to oil as the most economic and easily available source of energy and had largely based its industrial growth on it was rudely shaken at being denied this source of energy. It discovered with a shock that without oil it would be thrown back, at a stroke, into almost primitive days.

The oil producing Arab countries, besides enormously increasing the price of crude, stopped supplying oil to all those countries which did not condemn Israel for its refusal to withdraw from Arab land. In several countries, some of them enjoying economic boom, the entire industrial machinery and the transportation system came to a grinding halt. In others the prices of crude shot up to a point where it started intolerably hurting industrial growth. This had electrifying diplomatic effect, which no armies of Napoleon or Frederick the great could have achieved. Countries vied with each other in issuing statements promising solid support to the Arabs and condemning Israel for its recalcitrance. This culminated in the Israeli withdrawal from the Suez Canal Zone on the Sinai front and from Golan Heights on the Syrian front.

Apart from successfully using oil as weapon of war and diplomacy, the oil producing and exporting countries earned enormous profits from their oil. The fabulous wealth earned by these countries from their oil and the political influence wielded by them due to their unity in managing the export of oil is a development solely arising out of economic constraints of the modern world.

ECONOMIC COMPULSIONS

The relations among nations will increasingly be governed, in the days to come, by their economic needs and compulsions. Economic considerations will transcend political and ideological doctrines, historical enmities and religious, nationalistic and chauvinistic bigotries. Economic

realities will dictate new and seemingly bizarre relationships. New power centres will rise, necessitating new alliances for some sort of a balance of power.

Countries rich in mineral resources, raw materials and agricultural products and which can judiciously husband their resources for industrialisation are bound to acquire new dimensions of power. However, real power is more likely to be exercised by countries which are contiguously situated and which may form some sort of a common market for pooling and for better utilisation of their resources and technical skills. Countries from Iran to Burma fall into a neat pattern and command almost unlimited resources. They have oil, nuclear energy, coal, iron ore and a host of other mineral resources, besides rich agricultural lands, which with modern technology can yield bumper crops sufficient to feed the teeming millions of the region. They also have highly advanced technical know-how and necessary infrastructure for rapid industrialisation of the entire area. What is required is political wisdom. It is not unlikely that in course of time these countries will emerge as a common economic market, wielding enormous political power. This development is possible only if the leaders of this region sink their petty differences and rise above their narrow national interests and, above all, avoid falling prey to the machinations of interested foreign powers. There are already favourable signs of mutual co-operation and, as time goes, these are likely to pick up further. After all Germany and France were sworn enemies for centuries and a sizeable percentage of today's French population has been witness to the horrors of the blitzkrieg of Hitler. The Maginot line fortifications are standing monuments of an era when marauding hordes of German armies used to invade France, and the mention of the Siege of Paris invokes even today memories of dark period of French history. And yet France and Germany are today the two most important members of the European Economic Community with best of relations.

The Soviet Union and the United States have more or less renounced their ideological quarrels and are cooperating today on wide-ranging economic and technical projects. In a new economic offensive the Soviet Union has signed trade agreements with countries with which it did not have best of relations a few years ago. Today the Soviet Union has trade agreements with France, Germany, Japan and even China, which in unabated frenzy still pours all the choicest invectives on it. Their intensified political feud, border disputes and fusillade of polemics notwithstanding, China and the Soviet Union signed an agreement for the first civil air service between Moscow and Peking in 1973 permitting Chinese aircraft to overfly Siberia, something which was unthinkable only a few years ago.

Both countries followed it up by further agreements on exchange of goods and modes of payment. Trade between the two countries is likely to grow further, cutting across their hostility on the political front. The United States and China, for long at daggers drawn, have now signed trade pacts and are slowly enlarging the scope of their economic cooperation. In 1973 American trade with China surged forth tenfold from the 1972 level. Exports to China reached \$840 million by the end of 1973 and imports from China totalled \$ 60 million according to reports from officials of the White House and of the State and Commerce Departments quoted by newspapers. China's worldwide trade went up from \$ 4.7 billion in 1971 to \$ 5.8 billion in 1972 and was an estimated \$ 7 billion in 1973 representing about 4% of China's GNP which is the same as of the USSR. The United States is also seeking today friendship of Arab countries and helping Egypt and Syria to reconstruct their war ravaged economy.

Another area which has the potential of developing into a centre of power is Africa. Riven by tribal dissensions and exploited by the Whites, Africa is today an under developed continent with numerous problems. The Africans are, however, increasingly becoming conscious of their destiny. The formation of the Organisation of African Unity (OAU) was the first important step towards a political solution of their problems and as they become more industrialised, they would, no doubt, realise the importance of vast resources of their rich land and form themselves into an economic community which would rival any similar organisation in the world.

ALIBI FOR INTERVENTION

While the economic compulsions of the nations may provide them an impetus to seek regional cooperation and thereby help in lessening tensions and reducing the possibilities of an armed conflict among them, they may also provide them the alibi for intervention in the affairs of developing countries for exploiting their resources and raw materials. The military and global strategies emerging in the context of the economic needs of the countries in the years to come may assume several forms. Since there will be an increasing shortage of raw materials, the advanced countries are bound to seek, first, new pastures for raw materials and, secondly, to ensure that these raw materials are shipped back home through safe channels. As the pace of industrialisation increases due to economic cooperation among the regional countries, the search for new markets is bound to be intensified, leading, either to mutual inter-regional cooperation, or, to increasing rivalries.

Self-interest and survival in the face of keen economic competition may cement the bond among the regional and economically allied countries as long as their own national aspirations do not collide with each other but no sooner their interests clash than the members of the community would choose to go their own way and enter into bilateral relations with third parties. During the recent oil crisis the European Economic Community and the North Atlantic Treaty Organisation (NATO) were subjected to tremendous stresses and strains and some members chose to fend for themselves by entering into bilateral relations with the oil producing countries. If independent economic policy is found to serve the national interests better, a situation demanding severance of relations with other economic partners could also develop. France broke off from NATO on the nuclear policy and Greece quit it due to what the Greek Prime Minister Constantine Karamanlis felt was NATO's inability to stop Turkey from creating a situation of conflict between two allied countries over the Cyprus issue. Similar divergence of economic interest could cause a schism in the economic organisations too.

Militarily the members of the economic communities would find it more profitable to strengthen their economic bonds, for their common economic interests would bring them together militarily too, making it unnecessary to maintain large forces against one another. However, it is doubtful if a country would lower its guards even against its economic ally, even though the possibilities of a full-fledged war breaking out among the members of an economic organisation are becoming increasingly remote. However, the chances of a war breaking out between two similar organisations due to rivalry in pursuit of new markets for their products and raw materials for their industries cannot be ruled out. War could also break out over fishing rights, territorial jurisdiction over water, disputes over the continental shelf and right of passage on the high seas. Efforts at economic domination of the developing countries and machinations to thwart their plans to husband their raw materials for their own purposes may also lead to war. During the recent oil crisis, the threat of outside armed intervention in West Asia seemed so real that some countries in the region mined their oil wells to blow them up in the event of the threat materialising.

The only guarantee against such threats would be an organisation of the developing countries to manage their own raw materials and to demand just prices for them. In the absence of such an organisation, the developing countries would run a real risk of being subjected to all kinds of economic pressures or even being attacked and occupied by more advanced countries or group of such countries. The May 1974 UNO meet on raw materials highlighted the need for the developing countries to

organise themselves into well-knit communities for more intensive exploitation of their own raw materials and for using them for rapid industrialisation or for sale at reasonable prices.

The economic groupings of developed countries will no doubt result in an elimination of the threat of war among them except in situations of unavoidable clash of national interest but the affluence derived from economic prosperity will, however, strangely be used in an unprecedented arms race. Efforts to outdo each other will gain new momentum and the dichotomy of detente on one hand, and rivalry in the manufacture of increasingly sophisticated arms on the other, will become more accentuated. The developing countries will paradoxically follow the footsteps of the advanced countries and invest ever increasing sums of money in acquiring new weapons of destruction. The recent oil crisis brought fabulous wealth to the oil producing countries in West Asia, but most of them are spending their money on armament projects. While the advanced countries know the horrors of a modern war fairly well and would perhaps not let an inexorable situation develop, it is doubtful if the developing countries would exercise such restraint and avoid war. If war breaks out in Asia the advanced countries would get an opportunity to test their new weapons at the cost of Asian lives and to fish in troubled waters, economically, politically and militarily. However, the rat race for armament, rivalry for raw materials and confrontation arising out of protection of sea-lanes may involve the super powers themselves into a real conflict, bringing the missiles home to roost.

THE NEW ARMS RACE

Since his appointment as the U.S. Secretary of Defence in July 1973, Mr. James R. Schlesinger has attempted a reappraisal of the American armament policy in the light of what was according to him, a new "missile gap" in the Soviet-American nuclear confrontation.

In mid-1973 the Soviet Union was reported to have tested multiple independently-targetable re-entry vehicle (MIRV) warheads on at least two newly developed inter-continental ballistic missile (ICBM) vehicles, which according to U.S. analysts could pose a serious threat to the land-based U.S. ICBM force by 1975. One Russian MIRV package is believed to carry at least six warheads. Another two Russian strategic missiles are also possibly being equipped with MIRV.

According to the U.S. Defence Secretary, these developments will pose a serious threat to anything approaching a future military parity between the U.S. and the USSR and impose a roadblock to further concrete agreements in Phase 2 of the Strategic Arms Limitation Talks (SALT) between the two nations.

The Russian missiles referred to by Schlesinger are ; SS-17, SS-18, SS-16 &, SS-19. The SS-17, a follow-on to the one megaton-warhead solid-propellant SS-11 Savage, is designed to provide a first strike capability against USAF/Boeing Minuteman 3 ICBM silos. It is believed to carry four MIRVs. The SS-18 is being planned as a replacement for the liquid fueled SS-9 Scarp, which carries a 20-megaton warhead. According to Schlesinger the SS-18 MIRV carries "at least six" warheads with a force to the order of one megaton each or more. Referring to the Soviet missiles at a press conference, Schlesinger said "on the SSX-18 the Soviets will have at some point in the future...an array of warheads with yields of the order of one megaton and as presumably their accuracy improves that can be developed into a major counterforce threat against U.S.—based strategic retaliatory forces"* SS-16, has been planned as a replacement for the solid-propellant SS-13 ICBM and according to Schlesinger its purpose was not yet clear. The SS-19, is possibly a competitor to the SS-17 as a follow-on to the SS-11. Again firm evidence of MIRV tests with the SS-19 is not available. Schlesinger also reported on the development of the new long range SSN-8 submarine-launched ballistic missile for the Russian Delta-class submarine and said "there is no reason to assume that the Soviets will not ultimately MIRV their SLBMs. We have seen no evidence of that as yet."

Asked at what point "do your computers tell you" the Soviets might cross the U.S. in the number of warheads, where the U.S. currently holds the advantage, as opposed to total megatonnage, where Russia already holds the lead, the Defence Secretary replied, "By the early 1980s or mid 80s, they will have, if they continue the present programme, a very formidable force structure." Referring to the greater payload capability of the current soviet ICBMs such as the SS-9 when compared with the substantially smaller Minuteman, Schlesinger said : "What we are most concerned about...is the Soviets have a disproportionate amount of throw-weight—their throw weight is in the order of four to one. They have something of the order of 50% more ICBMs. If they marry the technologies

* Aviation Week and Space Technology, August 27, 1973, P-16, The subsequent quotations from James R. Schlesinger are also from this magazine.

that they are now acquiring to the throw-weight that they possess under the interim—and let me underscore—interim (SALT) agreement, then they could develop a clear preponderance of counterforce capabilities as distinguished from the U.S. We do not want to allow such an imbalance in terms of strategic forces to develop, and, therefore, the purpose of the SALT 2 negotiations will be to maintain a balance and to preclude the marrying of these newly acquired technologies to the existing Soviet numerical advantages.”

When the SALT I agreement was signed on May 26, 1972, Admiral Thomas H. Moorer, Chairman of the Joint Chiefs of Staff, felt that there was “relative strategic (nuclear) parity” between the two countries. The U.S. was limited to 1,054 land-based inter-continental ballistic missiles (ICBMs), 44 missiles launching submarines and 710 submarine launched ballistic missiles (SLBMs). The Soviet Union was permitted to have 1,618 ICBMs—91 more than she now has—62 missile launching submarines and 950 SLBMs. The agreement set no restrictions on the number of warheads that could be placed on each rocket. Nor did it limit bombers, short and medium range missiles and tactical nuclear weapons that can be used on the battlefield. By 1975 half of the U.S. land-based missiles should be MIRVs (multiple independent re-entry vehicles), each launcher tipped with a package of three independently targeted warheads that can hit widely separated, preplotted targets. Some operationally deployed Soviet missiles also had multiple warheads in 1972 but they were not yet independently targeted, and this made up a balance between the two. This balance was reportedly upset by mid-1973 when the Russians conducted tests of their own MIRVed missiles. The US had thought that the Russians were lagging behind by five years in developing MIRVs. Even now Schlesinger does not expect Russia to finish the development of MIRV technology before 1976—and more important, does not expect the Soviets to match the U.S. inventory before the mid-1980s. Still, the tests were a disquieting sign that the relentless Soviet momentum in weapons research is closing the technology gap. Schlesinger’s main goal therefore is to enable the American armed forces to meet the new challenge.

‘BARGAINING CHIPS’

To get SALT II going, the American Administration wants “bargaining chips” in the form of new weapons and argues that they may prove even more necessary if the talks fail. 1975 budget request includes \$ 1.3 billion to continue accelerating the development of the Trident missile

launching submarine which will eventually cost \$ 1.3 billion each to produce. The Navy wants Tridents to start replacing Polaris submarines in 1978. The budget also contains \$ 500 million for development of the B-1 bomber which the Air Force hopes to buy 244 for \$ 11 billion by 1980 as a successor to the aging B-52s. In addition, the Air Force wants \$ 20.6 million to test-fire eight Minuteman missiles from their silos in Montana 5,000 miles into the Pacific to demonstrate the system's reliability. Work on several new weapons system has also started. Among the items are (a) \$ 125 million for cruise missiles that could be fired from either submarines or aircraft. Powered throughout its flight by a jet engine, the 15-ft-long missile would fly up to 1,500 miles, hugging the surface to elude Soviet radar and deliver its warhead squarely on target; (b) \$ 248 million for advance ICBM technology; included in this fund is also the money for a new nuclear warhead called MaRV (for manoeuvrable re-entry vehicle) that could change direction in flight. It is a unique technological development to evade defensive missiles and has perhaps not yet been developed by any other country. It also would be more accurate than any existing Minuteman warhead; (c) \$ 16 million for the propulsion system of the Narwhal; a new small submarine that would carry an undetermined number of nuclear-tipped missiles and be so fast and manoeuvrable that it could perhaps evade Soviet antisubmarine forces for years to come, though the Soviets have a surprise development in that area themselves, they are building the world's largest aircraft which would fly just above the water level, detecting and destroying enemy submarines.

The arms race between the two super powers is becoming increasingly fierce and costly. A mighty array of new weapons, exotic in concept, is emerging rapidly. In years to come MIRVs and remotely piloted vehicles (RPV), carrying "smart bombs" could be guided to drop their load to hit targets with pin-point accuracy. These developments point to a first strike capability by both the super powers, i.e. a surprise nuclear attack to knock off all landbased nuclear installations. The only exceptions would be the missile-carrying submarines, for which no effective counter-measures appear in sight, at least in the foreseeable future.

STRATEGY IN THE EIGHTIES—II

THE CHANGING PATTERN OF NUCLEAR STRATEGY

The "posture" statement issued annually by the Defence Secretary of the United States is always an important document but 1974's posture statement by James R. Schlesinger is especially remarkable. Firstly, it expressed the American concern, bordering in fear, over the growing

numbers, sophistication, accuracy and destructive power of the Soviet weaponry, secondly, it reflected the determination of the United States to match them at a minimum effort and to overtake them if possible, and thirdly, it signified a shift in the doctrine for waging nuclear war.

The Schlesinger statement reveals the real source of the Pentagon's worry. By the end of this decade, the Soviet Union will have 7,000 land based long-range nuclear warheads averaging about one megaton a piece, while the United States—if no corrective action is taken, will have no more than 3,000 nuclear warheads averaging about 170 kilotons apiece. 1975's defence budget, therefore, provides the basis for bigger missiles, heavier warheads, better weapons for the Army, Navy and the Air Force and a change in the theory of nuclear war itself.

It is now seven years since NATO dropped its threat of "massive retaliation" in the event of a Soviet attack and switched to the less rigid promise of "flexible response", i.e. invasion from the east would be countered not necessarily by nuclear weapons but by whatever reply the circumstances demanded, nuclear or conventional, big or small. Unless forced to re-examine the options because of the deteriorating military balance, few people would now recommend a return to the old "tripwire philosophy" which had for so long kept Western Europe in the permanent shadow of an all-out nuclear holocaust.

In January 1974 Schlesinger disclosed that nuclear strategy had undergone another fundamental change. Hitherto the bulk of American strategic weapons, which provide an umbrella to the West, had been aimed at Soviet cities, threatening Russia with "assured destruction" should she ever contemplate nuclear aggression against the West. For 20 years now the American and the Soviet strategy has been based on a concept of deterrence that came to be known as mutual assured destruction. Called "MAD" an acronym coined by Mr. Brennan, a scholar of the Hudson Institute, the doctrine holds that peace is best maintained by threatening to obliterate an entire enemy society in retaliation for a nuclear attack. Thus, the policy-makers argue, nuclear war becomes unthinkable. In the summer of 1973 Schlesinger disclosed that the U.S. missile force was being retargeted to give the U.S. a "counterforce" capability; i.e. the means to strike, if desired, only at Soviet military forces and installations rather than let loose a wholesale volley that would also destroy population centres.

To justify the change in strategy, the Secretary of Defence argued that MIRV advances might tempt the Soviet Union to launch a limited nuclear strike against the U.S. Under MAD, the only possible U.S. nuclear response would have been an all-out attack on Soviet cities. That

would not only be inhuman but suicidal, because Russia would retain enough missiles — particularly those aboard submarines, which are virtually invulnerable to attack—to obliterate U.S. population centres. Henceforth nuclear attack upon the West would be met under the new policy of “flexible options”, not necessarily by the certain obliteration of say Moscow or Leningrad, but by whatever scale of nuclear attack the circumstances demanded. This could be one symbolic low yield missile fired as a warning shot, a bullet over the heads of the crowd, or the destruction of an enemy missile site or, in the last resort, the incineration of half the Soviet Union. Yet far from Schlesinger’s revelations being greeted with universal approval or even acquiescence, they have initiated a strategic debate which is continuing on both sides of the Atlantic.

TWO FEARS

Criticism of the switch in the nuclear strategy has centred upon two fears. One is that the nuclear threshold has been dangerously lowered. If the new doctrine of flexible options fails, then the most likely outcome is nuclear war, however limited in scale. The other is that the change may lead or even imply, advances in the arms race which could destroy faith in the Strategic Arms Limitation Talks. In fact, Americans have long been aware of the over-rigidity of the previous strategy of “assured destruction”. Robert McNamara acknowledged this in his Ann Arbor speech in 1962. But since the Soviet nuclear power was then governed by the Khrushchevian policy of minimal deterrence and since the United States enjoyed a substantial superiority in nuclear weapons, there was little incentive for change. President Nixon, however, presiding during an era of nuclear parity, had on several occasions, more recently, expressed his discomfort.

If the Russians attacked, say a country in Western Europe, would any United States President really feel justified in ordering the destruction of Soviet cities—which until now has been his single option? He would have to take such a decision in the certain knowledge that the next wave of Russian missiles would be aimed, not at Western Europe, but at Washington or New York. With a policy of “flexible options”, however, he would be able to demonstrate, as the Pentagon characteristically puts it, “capabilities along the entire spectrum of the nuclear threat.”

THE HUMP OF THE SYNDROME

If war is a continuation of politics, military strategy is essentially a handmaid of political strategy. Political aims of a nation, however, are deeply influenced, if not often dominated, by its military prowess. Some

countries see their political objectives through the blinkers of their military powers and some find their political aims so circumscribed by the military realities, both of their own and of others, that in spite of clear-cut political aims they are unable to realise them. A technological breakthrough in the art of war or the development of a new weapon-system may alter political objectives and military strategy. Economic compulsions of a nation too play an important role in the formulation of its political and military strategies and as the scramble for raw materials and new sources of energy becomes more intense, economic considerations will play an ever bigger role in shaping military and political strategies.

The interaction of economic, political and military developments presents such a confused mosaic today that it is difficult to figure out any particular pattern. This may perhaps sound somewhat platitudinous, for when in history has there been not a period of transition? But never before in history so much as happened in so many diverse fields in such a short time as it has in the past few years. Technological explosion, monetary crisis, inflation, energy crisis, economic crisis, youth revolt, arms race, protracted wars (like Vietnam) swift wars (like West Asia and Bangladesh) detente, new political and economic alliances and a rampant political mess almost everywhere—all these are highly diverse developments. Not that they have not happened at some point in history, but what is so novel about this syndrome is that all these developments are taking place today simultaneously, making confusion worst confounded. By the eighties, however, things will settle down to more recognisable political, economic and military forms. A new equation of power will emerge and the current transitory phenomenon will be replaced by a balance of alliances based on economic cooperation. Military strategy of the eighties will be tailored by the nuclear powers to promote their economic interests.

STRATEGY OF DETENTE AND ARMS RACE

One of the most baffling developments of modern times is the desire of the world leaders to live together in peace and their compulsion to add new and more destructive weapons to their armouries. The concept of detente is no longer a pious wish, today, but a political reality. The world leaders realise that the days of armed confrontation are gone and that there is much to benefit from economic and technological cooperation, and yet the arms race is becoming curiouser and curiouser. The new exotic weapons being furiously developed by the super powers and the acquisition of the latest arms by other countries, developed and developing, seem to give a lie to the talk of peaceful co-existence and mutual cooperation. The crucial question is whether detente is only a subterfuge to conceal the

manufacture of more destructive arms with a view to deriving greater political influence and economic gains. There is no straight answer to this question. The choice between peaceful coexistence and arms race is simple, but logic and reason and the desire to live and let others live in peace have never been the pillars on which history has been built. Will the nuclear weapons, MIRVS, MARVS, ABMS, Smart bombs, laser weapons and a host of other highly dangerous weapons of today make us more responsible, rational and peace-minded than the earlier generation ? Or shall we live under the thick and gloomy shadow of these weapons, awaiting to be consigned to a dreadful holocaust ? Detente is, therefore, not a political expediency but a sine qua non, an essential prerequisite for human survival.

The prospect of mere survival, however, has never been a very attractive proposition for mankind. Man has always been willing to take risks, howsoever great, to live with authority and power over those who are not willing to take risks. In his anxiety to achieve this, man has learnt the art of taming the risks for himself and escalating them for those who are reluctant to take risks beyond a point. At what stage will this point come cannot be determined by futurologists. A variety of factors will have to be considered to determine this stage. It does not, however, mean that detente will not work or will not be practised. Detente will be given a fair trial and the nation-states will increasingly draw towards each other for greater economic and technical cooperation but detente will not take them far. Detente will give way at the very first jolt administered to it by a country determined to seek power.

The future will witness an unprecedented acceleration in the arms race. In spite of the SALT talks the arms race has continued, if anything, at a faster rate. In future too efforts will be made to limit Arms race but loopholes will always be found to multiply and refine weapons of annihilation. The future weapons will be infinitely more exotic, more sophisticated more accurate and more destructive. Defence budgets of nation states will continually go up and an increasingly larger proportion of the gross national product will be spent on defence R & D and armament projects. Nuclear weapons will become common place and nuclear technology will be developed to such a refinement as to produce pistol bullets to kill, at one shot, a small group of people or rifle bullets to destroy an object like a jeep or a VIP staff car. Electronics and laser devices will be increasingly refined to improve accuracy of targetting. A wide range of nuclear weapons from pocket bombs, no bigger than matchboxes, to 100-megaton bombs will be available for destroying various types of targets. Modes of delivery will range from nuclear rifles to submarines.

PROLIFERATION OF NUCLEAR WEAPONS

There are several countries which have fairly advanced nuclear technology and which are capable of producing nuclear weapons within a reasonably short time. Some of these countries may desire to acquire nuclear weapons for attempting to impose their national will on others and some may acquire them only as a status symbol. The explosion of a nuclear device by India on 18 May 74 appears to have whetted the Pakistani desires to acquire nuclear weapons at any cost. India is politically a highly mature country and is irrevocably wedded to peaceful use of nuclear energy. She has been ceaselessly advocating destruction of all nuclear weapons and harnessing of nuclear energy for peaceful purposes. In a detailed exposition of India's nuclear policy at a luncheon meeting of the Foreign Correspondents Association for South Asia at New Delhi on 15th June 1974, Mrs. Indira Gandhi, the Prime Minister, reiterated India's desire to use nuclear energy for peaceful purposes. She reaffirmed that India would not stockpile nuclear weapons, because besides being "bad and dangerous," stockpiling "does not make one safer". She offered to sign a total test ban pact, "if everybody else agrees with it". She said that the world community has to work out a system "on a basis of equality where the human race can be safer and yet nobody can feel left out in the advance of science".^φ In an interview to the American Broadcasting Corporation in June 1974, Mrs. Gandhi explained that India exploded her nuclear device not with a view to joining the nuclear club but because of the "human, social and above all economic problem." She explained that India was a "different type of member" of the nuclear club. The others were nuclear weapon powers" whereas we just have the ability to explode a nuclear device."*

It is, however, doubtful if India's high ideals will inspire other countries to abjure the use of nuclear energy for destruction. Proliferation of nuclear weapons cannot be avoided unless all countries possessing nuclear weapons follow India's high example and banish nuclear weapons of descriptions once for all. However since this is unlikely to happen, several countries will go nuclear and the threat of the outbreak of a nuclear war would become a reality.

There are numerous groups of desperadoes and activists operating in various parts of the world, motivated by various kinds of pseudo-political philosophies. They may be tempted to stealthily manufacture nuclear weapons to wreak vengeance against a system, a government or a people.

^φ Sunday Standard, New Delhi June, 16, 1974.

* Indian Express, New Delhi, June 17, 1974.

There are also individuals who are haunted by real and imaginary wrong and injustices done to them by the society or by a particular group or race of people and they may be only too ready to commit nuclear arson. There are countries which are obsessed by their neighbours and may invent alibis for hurling a bomb or two at their neighbours in a certain mood of national desperation or in sheer chauvinistic fervour.

NUCLEAR STRATEGY OF THE SUPER POWERS

The super powers have global military interests and there are several areas where their interests clash. In the past the super powers have shown remarkable restraint and wisdom when confronted with uncomfortable situation. The Cuban confrontation of 1962 brought the world to the brink of a nuclear war but wisdom prevailed. The threat was removed and the world heaved a sigh of relief. In West Asia the two super powers cooperated recently to bring peace but the clash of interests remains. The relations between the Soviet Union and Egypt have become lukewarm but the once sour American-Egyptian relations have considerably improved. The United States has earmarked large funds for economic aid to Egypt and Syria, besides restoring ambassadorial relations with these countries. In June 1974, President Nixon became the first American President in 30 years to visit Egypt. In terms of Soviet-American relations this development was a setback to the Soviet Union and a significant gain to the United States.

Other areas of political and military disagreement between them are the Indian sub-continent, the Indian Ocean, South-East Asia, China, Africa and Latin America. Although the concept of peaceful co-existence and detente will receive further moral support from the super powers, they will continue to enlarge their nuclear stockpile. Even if the problem of throw-weight versus number of MIRVs is finally resolved following the Brezhnev-Ford agreement at Vladivostock in November 1974, the super powers would still find loopholes to gain superiority over one another. The current concept of building the strategic forces around Triad—land-based ICBMs, submarine-based nuclear weapons and bombers—will continue but concerted efforts will be made to improve the sophistication, accuracy and destructive capability of the weapons. Greater attention would be devoted to building submarines and equipping them with MIRVs. Since the submarines would ply in the deep depths of the seas, possibly undetected, they may be able to launch a nuclear attack from close range. It is, therefore, likely that the submarines may dispense with the long-range ICBMs, which serve no useful purpose for attack from close-by areas. The submarines may instead carry short or intermediate range missiles with

greater payload and accuracy and since these missiles are not covered under the SALT agreements, their number, unlike that of the ICBMS, could be increased to any desired extent. The quiet and undisturbed freedom of mobility of the submarines renders the giant ICBMS rather obsolete, for submarines are capable of approaching an enemy area as closely as they consider safe and launching a nuclear attack from the best possible range.

The coming decade will witness frantic efforts to develop devices to detect and destroy enemy submarines. The Soviet Union is reported to be developing a monster aircraft, which would fly just 25 to 50 feet above water—low enough to avoid radar detection—seeking and hunting enemy submarines. Development of an aircraft however, is only an interim answer to the problem, for aircraft are liable to be easily spotted and destroyed by the enemy. The field where all the best scientific and technical brains of the super powers would be concentrated in the years to come would be the manufacture of a reliable system of ABMs and of a high speed, highly mobile and light anti-submarines. Till a reliable anti-submarine device and ABM system are developed, the super powers would desist from starting a nuclear war, howsoever modest its beginning, because the enemy submarines would be able swiftly to avenge and obliterate entire cities. The coming years will witness feverish activity to improve the reliability of ABMs, for when the submarines attack what else can be relied upon except the ABMS ?

COUNTERVALUE—THE STRATEGY OF THE EIGHTIES

It is the enormous destructive capability of nuclear weapons and the fear of mutual annihilation which has been so far best guarantee against the use of nuclear weapons. But since smaller nuclear weapons, worthy of being used in tactical theatres, are now available, and since the area of destruction can be controlled and targets singled out for attack without much damage to others, nuclear war now becomes a possibility. The current American concept of "flexible options" is based on this possibility. However, the option may not be invoked at all, if the attacking country chooses a small population centre for destruction with credible threat to further escalate the attack, if retaliation is made. The attacked country may retaliate only at the cost of another and bigger population centre. Thus the country which takes the initiative in attacking a countervalue target would obviously enjoy an overwhelming advantage,

The American shift from counter-value to counterforce strategy will have to be revised again, for a counterforce strategy will not serve the purpose of credible deterrence. Destruction of a few nuclear sites will not appreciably alter the military situation, particularly when submarines

would keep moving under-water laden with sophisticated nuclear weapons. Even assuming that the attacking country's intelligence is perfect and capable of destroying all land based nuclear sites of the enemy, it will not be able to destroy the enemy submarines, at least at the current level of technological progress. Therefore, the country which gives unmistakable proof of its determination to knock out an enemy population centre—to begin with a small and remote one—will dictate terms. In any case the counterforce strategy will inevitably spill over or escalate into counter-value strategy and it is only when this stage is reached that the contending parties will show eagerness to resolve their differences by negotiation. Counterforce strategy by itself would yield not fruitful result, for the loss of a few nuclear installations would not compel a country to seek peace. International pressure to stop hostilities may work where the contending parties are small nuclear powers but if the belligerents are super powers, nothing except the fear of unacceptable destruction of civil population would deter them from escalating the nuclear war.

The NATO powers will seek greater independence from their military obligations to the USA in the years to come in spite of their recent "dedication"* to the cause for which NATO was formed 25 years ago. They will enter into trade relations with the Soviet Union and Warsaw Pact countries and as the threat of attack from the Soviet Union or Warsaw Pact countries recedes, the Atlantic alliance will disintegrate as a military entity. It will, however, further cement its bonds as an economic community and will draw closer to the Soviet Union, China, South East Asia and Africa for purposes for trade and economic cooperation. Militarily NATO will lose much of its importance in years to come. The withdrawal of Greece from NATO's military command, following conflict of interests over Cyprus with Turkey, has demonstrated the fallibility of NATO as a military organisation whose sole purpose was to combat the USSR's growing power. Now since the cold war era is over, NATO will lose its cohesiveness.

A new leadership will emerge in China and it will endeavour to resolve its border disputes with the Soviet Union by peaceful negotiation. Having freed itself from its border problems and bitter ideological feud with the Soviet Union, China will play greater attention to the countries of South-East Asia and try to establish her hegemony in this region. She will develop a sizeable nuclear force. China carried out her sixteenth nuclear test in the Lop Nor region on 17 June 1974 and

* At a summit meeting in Brussels in the last week of June 1974 held to mark the 25th anniversary of NATO, the heads of the 15-nation alliance re-affirmed their faith in its principles and aims.

is now well on its course to develop ICBMs. She has already developed some 50 medium range ballistic missiles and 20 to 30 intermediate range ballistic missiles (IRBM) of 2500 to 3000 kilometres range. China would use her military power to buttress her political and economic offensive in the area. She will also enlarge the area of her activity in Africa and try to win over new friends for the sale of her arms and industrial goods.

There does not appear much chance of relations between China and India improving in the foreseeable future, mainly because of inherent rivalry between the two countries. China will continue to back Pakistan and may even provide her a nuclear umbrella against India. China's continued instigation of Pakistan against India will serve her purpose of pinning down India to sorting out her disputes with Pakistan thus permitting China to establish her leadership in South-East Asia.

On account of the strategic importance of the Indian Ocean, the navies of the United States, Soviet Union, China, India and Japan will compete with one another in this region, and this may occasionally lead to a quarrel among them short of war.

The coming decade will witness many more countries going nuclear and since their reasons for going nuclear would primarily be military, the eighties may witness a swift war among the neo-nuclear powers. But before irreparable damage is done, the international community will interfere and prevent the belligerents from mutual destruction. However, should a nuclear war break out between the super powers, there would be enormous damage before the warring nations return to the negotiating table.

THE SINO-PAK RELATIONS : A PROBE INTO THE PAST DECADES

M.S. DAHIYA*

WHEN Pakistan joined the military alliance sponsored by the Western powers in the early 50s, it was observed in certain American circles that "this nation is solidly committed to the camp of free nations in the cold war". But the juxtaposition of some compulsions on the part of Pakistan and China's own designs in South Asia brought the two countries nearer. Since the main aim of Pakistan in joining these alliances was to build herself against India for the very purpose of settling the Kashmir dispute by force, and since her permanent allies could not provide military assistance up to its expectations, the foreign policy makers in Pakistan decided in favour of a stronger orientation towards the communists bloc.¹ In view of the fact that in the early 60s both India and China began to look at each other with jaundiced eyes, the Pakistani leaders found a fertile ground in Peking to achieve their objectives. China responded favourably and as such the horizontal relationship maintained by the "Bandung spirit" culminated into the vertically growing friendship.

Just after the partition of India, Pakistan was in search of some allies among the major powers to build her economy. But the American image of Pakistan² and Russia's wavering attitude³ towards the subcontinent

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1. On February 1, 1961, an article by a Pakistani leader (M.A.H. Ispahani, former Ambassador of Pakistan to America) appeared in the *Dawn* (Karachi) under the caption "Blow Zephyr Blow". It said : "It was a disastrous policy to alienate half of the world (the Socialist Bloc) by going out of our way to be friendly to it. Not to accept their policy or ideology does not necessarily mean that at every opportunity both within and outside the United Nations to *through* road blocs in their way. This attitude was most painful to those who saw their nose tips". M.A.H. Ispahani, "The Foreign Policy of Pakistan", *Pakistan Horizon*, vol. XVII, No. 3, Third Quarter, 1964, p. 245.)
2. In the early 50s, an American Congressman visited Karachi. He was asked as to what American thought of Pakistan ? The reply was : "My dear boy, they have not even heard of it". See R.S. Gupta, A study of Indo-U.S. Relations", *Foreign Affairs Reports*, vol. XXXIII, No. 5, June 1969, p. 52.
3. In the very beginning Russia considered both India and Pakistan as the colonies of Great Britain. According to a Russian writer, "The country *Pakistan* has formally received the rights of self-government, but, in view of the situation of millions of working people—landless peasants and factory workers—the present regime is semi-colonial, as was its predecessor." Mirzo Turshum Zade, "Beyond the Hills of Pakistan", *Current Digest of Soviet Press*, vol. II, No. 6, March 25, 1950, p. 29. (From Literaturnaya Gazeta, February 4, 1950).

compelled the Pakistani leaders to pursue an independent policy at a time when the Cold War between the rival blocs was striding towards a new dimension. By the time the Communists captured power in China, Pakistan was sitting on the shore. Since Pakistan had not committed herself to any bloc, she immediately extended de jure recognition to the new government as on January 4, 1950, and in September of the same year Pakistani delegate Zafrullah Khan in the U.N. strongly defended the case of China's admission to the U. N.⁴ Besides, in the Korean war Pakistan did not show any clear-cut inclination to either side. In the United Nations she supported measures against North Korea but abstained from voting on the resolution branding Communist China as an aggressor. It did not send any troops to Korea, but made a gift of 5000 tons of grains for the U. N. troops.⁵ After the exchange of Ambassadors in May 1951, in the following years China's need to buy cotton and Pakistan's desire to sell it led to some trade between the two.⁶

By 1954, Pakistan remained neutral and did not join any bloc. Since the main aim of Pakistan from the very beginning was to cement her relations with the United States in preference to the Soviet Union⁷ to build herself economically and militarily, she entered into alliances with the Western powers in 1954 directed and designed against the Soviet Union and China by any definition. The strange thing in this connection is that unlike the Soviet Union,⁸ China kept silent and not denounce the decision of Pakistan,⁹ As the Pakistani leaders had made their stand clear, the way for a good dialogue with Chinese leaders became quite easy. During the

4. Zafrullah Khan said : "The General Assembly is unwilling to concede the existence of a fact, not because the fact has not been established but because the majority regards it as pleasant.....It is entitled as of right to be represented in the United Nations like every other popular state, until it is.....expelled in accordance with the provisions of the Charter." *G.A.O.R.*, 5th Session, 283rd plenary meeting, 25 September 1950, p. 97.
5. "Liaqat Ali Khan Shows Service Zcal", *New Times*, No. 28, July 12, 1950, p. 19.
6. See *China Report*, vol. I, No. 4, June 1965, p. 5.
7. According to a Pakistani Group Study : "Pakistan had noticed the subservience which was forced upon the allies of the Soviet Union and, as we have seen, independence had been own after too profound a struggle for its loss to be risked. Furthermore, there was the question whether Russia could supply the aid, both material and technical, which Pakistan so urgently required. For these reasons, an alliance between the two countries was, ab initio, impossible" "Fundamentals of Pakistan's Foreign Policy" (A Group Study), *Pakistan Horizon*, vol. IX, No. 1, March 1956, p. 46.
8. On November 30, 1953, the Soviet Ambassador to Pakistan met the Pakistani Foreign Secretary and expressed Russia's concern over this development in strong words. See Devendra Kaushik, *Soviet Union's Relations with India and Pakistan* (Prerna Prakashan, New Delhi), First Edition, 1971, p. 39.
9. Major General Raza, the then Pakistan's Ambassador in Peking, was successful in convincingly explaining to the Chinese leaders the reasons which had prompted Pakistan to join the Western-sponsored military alliances. Therefore China did not raise any voice of protest against this step of Pakistan. See Mohammed Ayoob, "India as a Factor in Sino-Pakistani Relations", *International Studies*, vol. 9, July 1967—April 1968, p. 285.

Bandung Conference in 1955, Mohammed Ali Bogra, the then Prime Minister of Pakistan, met Prime Minister Chou-En-lai twice and assured him that Pakistan's membership of SEATO was in no way a hurdle in the way of friendly relations between the two countries, as it was only a "defensive measure". The Prime Minister of Pakistan further declared that "if the United States should take aggressive action... Pakistan would not be involved in it."¹⁰ On her part, Peking observed strict neutrality on the Kashmir issue in spite of the fact that it had cordial relations with New Delhi.

The "Bandung spirit" was given a new lease of life when Madam Sun Yat-sen appeared in Karachi in 1956, followed next year by Chou-En-lai.¹¹ Earlier in October 1956, when Prime Minister Husain Shaheed Suharwardy visited China, he declared: "I see this country wants friendship with every other country. It wants to go out to assure every country that it means well.....If China seeks the friendship of the world, it is the duty of the world to seek the friendship of China."¹² In response to these utterances, Prime Minister Chou-En-lai of China stated that there was no doubt that Pakistan was attached to SEATO, as its officials and people were inclined to make friendly relations with China, there was no reason why China could not be friendly with Pakistan.¹³

By the time Ayub captured power in Pakistan in October 1958, the relations between the two countries fluctuated between normal and good. Since Ayub Khan was known for his pro-West views,¹⁴ the growing relations could not be developed further for some time. When China took drastic action to suppress the revolt in Tibet, both the government and press in Pakistan strongly condemned it. In view of the Tibetan revolt, President Ayub Khan "made India an offer of joint defence of the subcontinent on the condition that outstanding disputes between the two countries especially the dispute over Kashmir, should be satisfactorily settled". But the Indian Prime Minister, Pt. Nehru, did not pay any heed to the offer and rejected it at hand. According to an Indian scholar on Pakistani affairs :

Ayub Khan apparently decided that if it was possible to reach an agreement with India which would permanently remove the

10. It was stated by Chou-En-lai, while speaking before the Political Committee of the Bandung Conference on April 23; 1955, See *China Report* No. 6, p. 5.
11. Werner Levi, "Pakistan, the Soviet Union and China", *Pacific Affairs*, Vol. XXXV No. 3, Fall 1962, p. 221.
12. *Dawn* (Karachi), October 21, 1956, cited in Mohammed Ayoob, no. 9, p. 286.
13. *Dawn* (Karachi), October 24, 1956, cited in *Ibid*.
14. According to Colonel Mohammed Ahmed, the U.S. military assistance without which "the Pakistan Army could not have been equipped and recognised...was made possible through.....the efforts of General Ayub Khan". The plan was "born in his mind and it was through his negotiations with American political and military leaders : that Washington invited Pakistan to enter into a Mutual Defence Pact". Colonel Mohammed Ahmed, *My Chief* (Longman, Green & Co., Pakistan Branch, Lahore), First Published, 1960, pp. 73-74.

threat from India, such an agreement was well worth the resulting displeasure of the Government of China, especially since the Western Powers would then stand solidly behind a joint-Indo-Pakistani front against China. Ayub Khan must have reasoned, moreover, that even if this offer.....was rejected by India, it would still serve a purpose by dramatically demonstrating to his Western allies.....his sincere desire for all understanding with India..."¹⁵

In view of the fact that this step of Pakistan was an appalling thing for Peking, she turned towards China for repairing the damage done to the relations.¹⁶ As far as China was concerned, it soft-pedalled the incident. Even when the U-2 incident occurred, China strongly condemned the United States but refrained from criticising Pakistan.

Certain events in the Fall of 1959 and the beginning of 1960 gave new impetus to growing relations between China and Pakistan. The death of John Foster Dulles, Eisenhower's visit to India in 1959 coupled with the victory of J.F. Kennedy, an admirer of Nehru and an old India hand, in 1960 in the presidential election created suspicion in the minds of Pakistani foreign policy makers. On the other side the border disputes between India and China began to warm up. Under these circumstances Islamabad and Peking came closer. The Pakistani leaders felt the necessity of coming to "an understanding with the Government of China about the demarcation of the border between Sinkiang and Azad Kashmir". As the Chinese leaders were inclined to build their own image in the Afro-Asian group, they responded favourably thinking that this step would prove China as a peace-loving country.¹⁷ In spite of the protest made by the Indian Government, China's reply was that India could not cite any statement by any of the Chinese leaders or official spokesman which had accepted the Indian position on Kashmir.¹⁸

Even before signing the border agreement in 1963, Pakistan took some concrete steps to cement her relations with China. Up to 1960 Pakistan

15. Mohammed Ayoob, no. 9, p. 288.

16. The then Pakistani Foreign Minister, Mr. Bhutto, while speaking in Dacca, said: "Surely as a Government it is our responsibility to see that such a situation as the one that existed on the Sino-Indian border, God forbid, is not repeated for our people in which we are unnecessarily involved in a misunderstanding with a neighbour and a great power. Surely we would not like to see the tantrums and all the crisis that has been created as a result of misunderstanding over the boundary between the People's Republic of China and India", Quoted in *ibid.*, p. 289.

17. The then Foreign Minister of Pakistan, Mr. Bhutto, at the same time, went to the extent of declaring in the National Assembly that "an attack by India on Pakistan involves the territorial integrity and security of the largest Asian country..." It was interpreted by political observer as a reference to Chinese support against India. See *Pakistan Horizon*, vol. XVI, No. 3, Third Quarter, 1963, p. 262.

18. Chinese note of 31 May 1962, White Papers, Ministry of External Affairs, p. 101.

voted with the Western powers, over the question of China's admission to the U.N. But in 1961 Pakistan sided with the Russian resolution and voted for China's entry. Besides, in the summer of 1962 Pakistan made it clear in anticipation that Pakistan would not send any troops under the SEATO obligations to protect Thailand. The New York correspondent of the *Dawn* (Karachi) stated that "the nation could not be expected to participate in military measure in Laos while she was negotiating with China for a demarcation of their common border and the Kashmir dispute was pending before the Security Council". The editor of the paper in an article (on May 18, 1962) stated that the United States had brought herself the trouble in Laos. "She made SEATO unreliable by crippling it, by wooing India by restricting the applicability of the alliance....."¹⁹ Moreover, a trade agreement between China and Pakistan was signed on January 4, 1963. This was followed by the conclusion of a barter agreement between the two in September 1963, providing for the exchange of Pakistani jute for Chinese cement.²⁰ At the same time in September Pakistan concluded a civil aviation agreement with China. This step of Pakistan was considered in the American official circles as a breach of free world solidarity. As such the U.S. State Department announced the suspension of a loan for \$ 4.3 million that had been promised to Pakistan for the improvement of Dacca airport.²¹ Notwithstanding the American resentment over this development, a direct radio-photo and photographic service between Karachi and Peking was established and New China Agency and Associated Press of Pakistan negotiated an agreement in 1964.²²

By the time Prime Minister Chou-En-lai visited Pakistan in February 1964, the growing friendship between Peking and Islamabad had been cemented. As the main aim of China was to eliminate the influence of Washington, she openly supported and defended the cause of Pakistan. During his visit to Pakistan in 1964, Chou-En-lai came out fully in support of Islamabad when he declared that the fate of Kashmir should be decided by the people of Kashmir.²⁴ Since Kashmir has been the touchstone in

19. See Werner Levi, no, 11, p. 221.

20. Shivaji Ganguli, *Pakistan-China Relations: A Study in Interaction* (Centre for Asian Studies, University of Illinois, 1972), p. 20.

21. M.S. Venkataramani and H.C. Arya, "America's Military Alliance with Pakistan. The Evaluation and Course of an Uneasy Partnership", *International Studies*, vol. 8, July 1966-April 1967, p. 117.

22. Shivaji Ganguli, no. 19, p. 20.

23. After the conclusion of border agreement Chou-En-lai is said to have declared that "China will defend Pakistan throughout the world as Pakistan defended China in SEATO and CENTO". Cited in Jayanta Kumar Ray, "India and Pakistan as a Factor in each other's Foreign Policies", *International Studies*, vol. 8, July 1966-April 1967, p. 61.

24. The Chinese Foreign Minister went to the extent of declaring that there would be enduring friendship between China and Pakistan even after the settlement of Kashmir and Taiwan. See *Dawn* (Karachi), February 24, 1964.

Pakistan's foreign policy from the very beginning, it was a declaration of great jubilation for the Pakistani leaders. At the same time Pakistan began to question America's opposition to China when she was inclined to come to terms with the Soviet Union. Besides, in an interview with the B.B.C. in London in 1964, Ayub made it clear that should there be any serious confrontation between China and U.S. over North Vietnam, Pakistan in spite of her SEATO obligations, would not get involved.²⁵ Moreover, when Pakistan began to build friendly relations with the adversaries of America, in July 1964 China offered a \$ 60 million, long term, interest-free loan, to be repayed by Pakistan mainly with cotton and jute, in order to purchase Chinese heavy machinery, coal, cement, sugar mills, and a paper mill to be built in Chittagong.²⁶ The process of increasing "collusion" between Islamabad and Peking got new impetus when Ayub Khan visited China in March 1965. "Instead of complaining about the role of Ayub Khan, as Peking did as late as 1959, the Chinese now declared that ever since Ayub Khan's coming to power, relations between China and Pakistan had improved and President Ayub Khan was given a great deal of credit for it."²⁷

When the Indo-Pak war started in September 1965, China wholeheartedly came out in Pakistan's support. She gave ultimatum to India for the very purpose of diverting India's attention. It is not known what kind of material assistance China extended to Pakistan during the conflict, but the prima facie evidences were given on the occasion of National Day (March 23, 1966) of Pakistan. A few days later, Lin Shao-chi, Chairman of the Government of China, with his Foreign Minister, visited Rawalpindi and was given a "rousing reception." He reaffirmed China's support on the Kashmir issue and said that "the Kashmir dispute should be settled in accordance with the wishes of the Kashmiri people....."²⁸

Up to 1966 the aim of China was to detach Pakistan from the United States and to a large extent she proved successful. But after the Tashkent Declaration, when the Russian influence began to increase in Pakistan, China began to take more interest in establishing a solid foundation of relations between Peking and Islamabad in view of the fact that Pakistan had control over some strategic points in Gilgit bordering the

25. George J. Lerski, "The Pakistan-American Alliance ; A Revaluation of the Past Decades", *Asian Survey*, vol. VIII, No. 5, May 1968, p. 411.

26. *Ibid.*

27. V.P. Dutt, "China and Indo-Pakistani Relations", *International Studies*, vol. 8, July 1966-April 1967, p. 131.

29. Cited in *Ibid.*

30. Until 1968 U.S.S.R. and the United States had granted \$ 241 million and \$ 3.4 billion respectively in credits to Pakistan. See Shivaji Ganguli, no. 19, p. 41.

Sino-Soviet boundary. As such some sort of material assistance was essential. It is estimated that by 1968 China granted near about Rs. 100 million in credits to Pakistan. Though in comparison³⁰ to U.S.S.R. and the United States, this assistance had no significance, as Khalid Bin Sayeed said, "what is.....important is the fact that Chinese continued hostility towards India and their cordiality towards Pakistan."³¹

Since the armoury of the Soviet Union began to flow in Pakistan in July 1968, it was natural on the part of China to make some friendly gestures. On Pakistan's National Day (March 23, 1969) Chinese Vice-Premier assured Islamabad:³²

The Chinese people will always remain your reliable friends to oppose foreign aggression and interference and safeguard national independence. The Chinese people remain unshakable in adhering to their stand of giving resolute support to the Kashmiri people's just struggle for the right of self-determination.

In return when Pakistani Air Marshall A.R. Khan visited China in the beginning of 1970, he said that "Pakistan believed that the People's Republic of China was fully entitled in its own right to play a leading role in the affairs of the world. Pakistan rejected the concept of two Chinas."³³ The continued intensity of the Sino-Pak relations may be understood by the successful visit of President Yahya Khan to China in November 1970. As it was usual, both the countries reiterated their stand on issues, such as Taiwan, Kashmir and anti-imperialist struggle.

By the time the Civil War broke out in East Pakistan (Now Bangla Dsh) in March 1971, the friendship between Peking and Islamabad had reached its climax. When the entire world was criticising the atrocities committed by the military junta, China was wholeheartedly supporting Islamabad. The Chinese leaders pledged every possible assistance to safeguard the territorial integrity and political independence of Pakistan. Even at present, despite the fact the Pakistan has been cut to size, the Chinese leaders are inclined to boost the tottering fortunes of this doddering country. The Nixon-Chau-En-Lai communique of Sanghai in 1972 in regard to the Kashmir problem, the declaration of both political and

31. Khalid Bin Sayeed, "Preliminary Analysis of Pakistan's Foreign Policy", *South Asian Studies* (University of Rajasthan), vol. 3, No. 2, July 1968, p. 79.

32. "Premier Chou Attends Pakistan's National Day Reception", *Peking Review*, 28 March 1969, vol. XII, no. 13, p. 27. Cited in V.S. Budhraj "From Tashkent to Treaty of Peace, Friendship and Co-operation: A study of Recent Trends in Moscow's South Asian Policy", *The Indian Journal of Political Science*, vol. XXXIII; No. 4, October-December 1971, p. 495.

33. See *Asian Recorder*, January 1-December 31, 1970, p. 9648.

military support to Pakistan, in case she is attacked by India, at the time of Bhutto's visit to China in May 1974, China's tirade against the Indian nuclear explosion of May 1974 in support of Pakistan and the purported move of Chinese leaders to extend nuclear energy to Pakistan, in case the United States does not respect its treaty obligations to provide war material to Pakistan, may be viewed as a clear-cut pointer of continued hostility to India and friendly attitude towards Pakistan.

In the concluding lines it may be said that India has been a major factor in bringing Pakistan and China so close. It seems that so long as there exists strained relations between India and Pakistan on the one hand and China on the other, the friendship between Pakistan and China will go on increasing. For the furtherance of such developments America also played quite an important role in the 60s when she started assisting India both economically and militarily. Since the main aim of Pakistan has been to build herself against India, she joined the military alliances sponsored by the Western powers in the 50s. When in the 60s the United States did not pay heed to the interests of Pakistan, she turned to the adversaries of the United States. As the relations between China and India were deteriorating day by day, the Chinese leaders began to defend Pakistan for their own designs. This state of affairs laid the foundation of friendship between the two and so long as it exists Peking and Islamabad will go on supporting each other.

THE DHOFAR INSURGENCY : AN OVERVIEW*

M.A. SALEEM KHAN

A *Challenge to the Gulf System*—The present insurgency in the Dhofar province of the Sultanate of Oman, a strategic kingdom in the Arabian Peninsula and the western Indian Ocean, is not only a challenge to the Sandhurst-educated young Sultan Qabus but also to the security system of the Arab-Persian Gulf.¹ When it started on 9 July 1965² in Dhofar it was hardly more than a local movement with ultimate secessionist aims as a reaction to the then Sultan Said's policy of deliberate neglect of the area³. But in 1968 this limited separatist movement acquired an ideology, changed its objective and expanded itself to cover the whole Arab-Persian Gulf. It styled itself as the Popular Front for the Liberation of occupied Arab Gulf (PFLOAG). Then later in 1971 it merged with another movement working mostly in the Jabal Akhdar area (Central Oman), and renamed itself as the Popular Front for the Liberation of Oman and the Arab Gulf (against PFLOAG). In November 1972 the Arab Action Party of Oman was merged with the PFLOAG.⁴

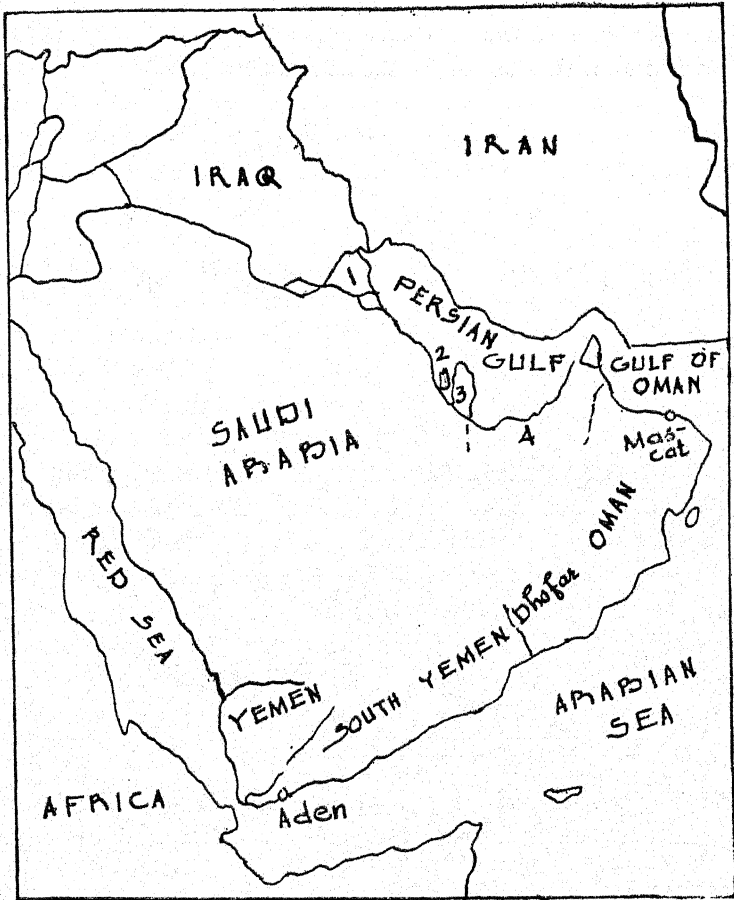
The Old Oman—The former ruler of the country, Sultan Said bin Taimur, who had been ruling since 1930s, had acquired peculiar habits and fads based on suspicion and mistrust of his people. He neither desired nor allowed any change in his country. He had imposed every medieval

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1. For the security system of the Persian Gulf see M.A. Saleem Khan, "The Persian Gulf Security System" a paper presented in the Seminar on the Indian Ocean 18-19 February 1974, held in Jawaharlal Nehru University (New Delhi); published recently. A detailed analysis of this security system, along with a detailed study of the Dhofar Movement has been made in M.A. Saleem Khan; *Security System of the Persian Gulf : A Systemic Analysis*, to be published.
2. Every year on 9 July the foundation day is celebrated by the Movement. See for instance the 8th Anniversary statement in *Al-Hurriyah* (Beirut) 18 July, 1973, p. 3. This Marxist weekly from Beirut is the main international forum for the Movement.
3. Perhaps the main cause of the separatist tendency was that the Dhofar dependency of the Sultanate of Muscat and Oman was not only a geographically isolated area cut off by a vast stretch of desert from the mainland, but also ethnically and linguistically different from it.
4. See the statement in *Al-Hurriyah* 18 July 1973 where the date of merger is given as November 1973 which is obviously a printer's devil.

restriction upon his people to keep them backward, ignorant and unhealthy. As aptly described by Holden, "Wrapped in secretive and suffocating silence behind its rocky promontories, it (Oman) has become the last Rip Van Vinkle of Arabia".⁵ Even in the late 1960s when everywhere in the

THE PERSIAN GULF

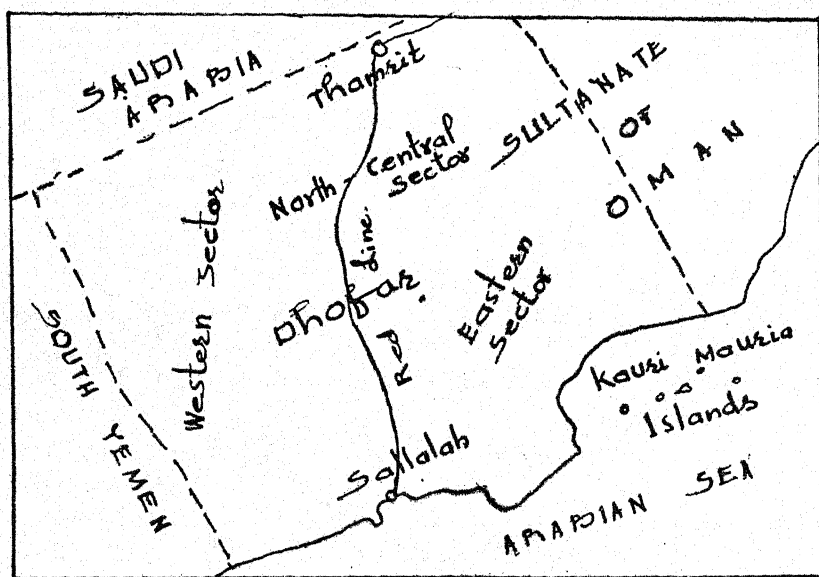


Arabian Peninsula and the Gulf oil revenues were being spent liberally on welfare activities, and Oman had itself started receiving such revenues, the Sultan had not outgrown his habit of holding money in a back chamber. The Sultan was best described by Owen : "Oman is famous for its fossils; until July 1970 [when Sultan Said was ousted by his son Qabus] the biggest

5. David Holden, *Farewell to Arabia* (London, 1966), p. 214.

of them all was to be found in Sallalah",⁶ the headquarters of the Province of Dhofar, where Sultan Said used to live in isolation from both the Dhofaries and the Omanis proper, surrounded only by his ignorant and sycophantic officials and Negro slaves.⁷ His rule had become "dysfunctional" not only for the survival of the institution of monarchy in Oman, but also harmful to the British strategic and commercial interests attached to the monarchic survival, and the monarchic security system that was going to be established in the Gulf.⁸ The result was that through a palace revolution young and educated Qabus ousted his ante-deluvian father Said with the help or connivance of the British on 23 July 1970.

PROVINCE OF DHOFAR



The Young King and the Insurgency—The Young King with an avowed aim of removing the wrongs done by his father, and establishing a

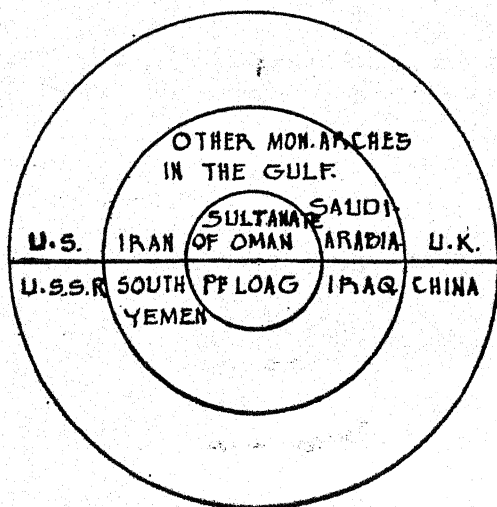
6. R.P. Owen, "Developments in the Sultanate of Muscat and Oman", *World Today* Vol. 26, No. 9, September 1970, p. 350.
7. For a good description and political analysis of recent Oman, in addition to the above two books (Holden and Owen), see Robert Geran Landen, *Oman Since 1856 Disruptive Modernization in a Traditional Arab Society* (Princeton, 1967).
8. In an interview in April 1970 (a few months before Sultan Said was overthrown) the Shah of Iran, the main system-builder and system-sustainer of the Gulf security had said that it was high time to reform the medieval systems that survived in parts of the Gulf area, the Muscat and Oman in particular; and had gone to the extent of saying, obviously referring to Sultan Said, that rulers who blocked reforms would have to be replaced (See London Times 13 April 1970). It is not inconceivable that the Shah among others must have insisted on the British authorities to replace Said with his Sandhurst-educated son Qabus. see *Economist*, 4 April 1970.

welfare state, inaugurated his regime. He appointed his uncle Tariq bin Taimur, a comparatively enlightened person long in exile, as his Prime Minister, and made an appeal to the PFLOAG to terminate its activities as the reasons for their continuance no longer existed. Some individuals among the insurgents surrendered and came over to the side of the government but a large section remained attached with the movement. It was too late, however, for the movement to come round to the idea of supporting a British-protected monarchy even when its new incumbent was an enlightened and welfare-oriented young man. The movement was no longer under the Dhofar Liberation Front which, perhaps though not necessarily, could have been won over if Qabus had ousted his father much earlier. But now it had been taken over by the Marxist leadership closely allied to the Marxist-oriented National Liberation Front (NLF) of South Yemen which had fought against the British and won independence in late 1967.

Regional and International Dimensions—South Yemen, now independent and under the NLF, was actively helping the Movement morally and materially. Iraq, the only republic in the monarchic Gulf, was also supporting the insurgents. Chinese mainly, and the Soviet Union to some extent were training and arming the insurgents. Britain and the U.S. on the other hand, were worried that the Dhofar Movement might spread to the Gulf and endanger their oil, general economic, and strategic interests. Iran was anxious to keep the oil routes in the Gulf and the Arabian Sea secure and the Gulf security system intact. Saudi Arabia was bitter that in her backyard in Southern Arabia a liberation movement (NLF) had legitimized itself in the form of a ruling party in South Yemen, and another liberation front (PFLOAG) was trying to topple the monarchy in Oman and export revolution to the Gulf with the ultimate aim of destroying the pro-Western monarchic systems. The Arab Emirates from Kuwait to the United Arab Emirates (UAE) were afraid that the wind of marxist revolution might overtake their reformist "White Revolutions".⁹ Thus a clear polarization had emerged in 1971 at three levels : local, regional and global which can be presented in the following three concentric circles. (Page 32)

The Development of Insurgency—Sultan Qabus very soon established friendly relations with Saudi Arabia, Iran and the small Gulf States which were interested in establishing an apparatus of stability in the Gulf and were looking upon the Dhofar insurgency with apprehension. Many offensives were launched but the insurgents could not be dislodged from

9. Here the term "White Revolution" has been used in a generic sense derived from Iran's White Revolution. In this sense it may mean a reformist movement covering socio-economic changes to stall a bloody *coup d'etat* or a communist revolution.



their strongholds.¹⁰ There were always conflicting news: the Omani authorities and pro-Oman media claiming to have inflicted heavy defeats on the insurgents while Aden Radio and *Al-Hurriyah* were claiming victories for the insurgents. However, despite many offensives by the British officered Sultan's army and despite the help of Jordan, Saudi Arabia and Pakissan, the insurgency could not be controlled. In mid-1973 Iran admitted to have sent its forces to fight in Sallalah at the invitation of Sultan Qabus. Later it claimed to have opened the Red Line but the insurgents counter-claimed that the Iranian armies were prisoners in their own seven camps and did not venture out for fear of ambush. Recently the Omani authorities announced that the Iranian armies were returning.¹¹ If this is true, they were apparently returning without completing their job. This is also evident from the meetings of Sultan Qabus and Al-Zawawi, Minister of States for Foreign Affairs, with the Prime Minister and other leader of the U.K. in London in late October.¹² The Government of U.K. also agreed to sell supersonic jet bombers to Oman.¹³

10. The mountain and forest area of Dhofar covers the whole region except the coast and the small patch of plain around Sallalah in the south, and the desert merging with the Empty Quarter in the north. This mountain and forest area is regarded as extremely suitable terrain for guerrilla warfare. The insurgents numbering in various times from 1000 to 3000 including the militia have about 50,000 population for sustenance. At the time of pressure they can fall back upon adjacent South Yemen, which has placed its eastern district at the Front's disposal, and is also a conduit for military aid from outside as from China, Soviet Union and now Cuba. The area is divided into three sectors: eastern, western and north-central. The strategic road connecting the capital of Oman (Muscat) with Sallalah (the capital of the Dhofar Province) via Thamrit, passes through the north-central sector, and is called the Red Line.
11. *Middle East Economic Digest*, 18 October 1974, p. 1229.
12. See *Kayhan*, 2 November 1974,
13. *Kayhan*, 10 November 1974.

Perennially Rebellious Mood of Oman—The PFLOAG is hardly a one-decade phenomenon, but Oman suffers from a perennial problem, i.e. an endemic rebellious mood arising from the never-dying institution of Imamate. Oman is the only country in the world where the Ibadis constitute the majority. The Ibadis are a mellowed-down and moderate subsect of a politically and religiously fanatical sect of early Islam called the Kharijites. However, they still believe, in political realm, in two cardinal principles :

1. The Imam (the head of the State) should always be an elected one, with the corollaries that an Imam who is unelected is no valid Imam and that a hereditary Sultan is not a legitimate ruler;
2. When circumstances do not permit the election of an Imam the community can live without an Imam until circumstances improve. Then an Imam will be elected.

The history of Islamic Oman during the last millennium has been replete with successful attempts to establish an elected Imamate, though there has been a frequent tendency on the part of the duly elected Imam to pass the Imamate on to his son, and thus establishing a dynasty. The present ruler Sultan Qabus is also a descendant of such a dynasty called Al-Bu-Said.¹⁴ However, during the reign of this dynasty also which ruled mostly on the coastal Oman there have sometimes been elected Imams in inner Oman, sometimes tolerated by the Sultans. For example, Imam Khalili ruled from Nizwa (Central Oman) from 1920 to 1954 while the Sultan ruled from Muscat. After the death of the Imam an election was held in 1954 in which strangely enough Sultan Said bin Taimur himself was a candidate, but he lost and another candidate Ghalib bin Ali was elected. Then the Sultan's armies occupied Nizwa, the capital of the Imam. Later again the Imam was defeated and his supporters are now in exile seeking help from various Arab countries. But in the late 1950s and till the 1960s most of the Arab countries supported the cause of the Imam and pleaded his case in the United Nations. Saudi Arabia allowed [the Imam to set up a government-in-exile in Dammam. Now Saudi Arabia has disowned the Imam and improved relations with the Sultanate which had been strained due to the Buraimi Oasis crisis in the mid-1950s. Now hardly any Arab country encourages the fugitive Imam except perhaps Iraq.

14. For a detailed discussion on this aspect in historical perspective see M.A. Saleem Khan, "Oman; An Ibadhi-Tribal-Monarchic Syndrome", *Islam and the Modern Age* (New Delhi) Vol. 5, Nos. 1, 2, February, May 1974, pp. 71-90, 52-70. See also Roberto Rubinacci, "The Ibadhis," in A. J. Arberry (ed.) *Religion in the Middle East : Three Religions in Concord and Conflict* Vol. II (Islam), (Cambridge, 1969).

Prospects—However, despite the rebellious mood of the Central Omanis, and the hardihood and resilience of the Marxist guerrillas in their region, the prospects of the latter's expanding into Oman are dim.¹⁵ In a still medieval Oman, with a small middle class, an incipient working class movement, and with the majority of the traditional, isolated and excessively religion-oriented tribal people of the mountains, the Marxist insurgency at a distant corner of the state, almost completely dependent on external help, and attempting to spread an ideology which can hardly be appreciated by the people, appears to be premature and adventurist. Its future appears to be uncertain also because of the formidable array of forces that have combined to fight it—the growing Omani strength, the British air power in Oman, the massive Iranian armed support, the large Saudi financial and military aid, and lastly the Jordanian and Pakistani help to the Government of Oman, not to mention the American support. The oil-generated prosperity of the Gulf is a great attraction for the Omanis to better their prospects. The economic and social development under the new regime, however, meagre, and prospects of oil prosperity in Oman itself, undercut the Marxist rebellion. China, in order to improve her relations with Iran in the Asian and global power balance, has disowned the Dhofari insurgency. The Soviet Union is supporting it, but its support is bound to be at a low key and limited, unless it decides to escalate it by a major policy decision. It has become almost a status-quo power. Its improved relations with Iran, though with an essential uneasiness on both sides, are an indication. It does not want to see continued disruption on its southern borders. With growing detente with the U.S. in terms of strategic arms limitation, and in order to improve her economy with the Western advanced technology, it apparently does not want in the near future to disturb the area on which the West is so critically dependent. Moreover, in the Arabian Peninsula and especially in the Gulf region the Soviet position is much weaker than that of the U.S.

15. The PFLOAG has dropped "Arab Gulf" from its name and area of operation a few months ago, and is called now the Popular Front for the Liberation of Oman (PFLO). See for an authoritative report, *Al-Hurriyah*, 12 August 1974, p. 9-10.

THE TEACHING OF MAINTENANCE SYSTEM

LIEUT COLONEL YA MANDE

THE teaching of the maintenance system in our Army needs revision. There is wide variation between teaching and practice and it is difficult to comprehend theories that bear hardly any relationship to actualities.

This article analyses the teaching of the maintenance system to enable a better comprehension of the subject. In training establishments, it is common first to explain the maintenance system as inherited from World War II and then touch upon the modifications applied to our country.

THE CLASSICAL PATTERN

The classical pattern can best be illustrated by a model. See Fig. 1 (a) below:-

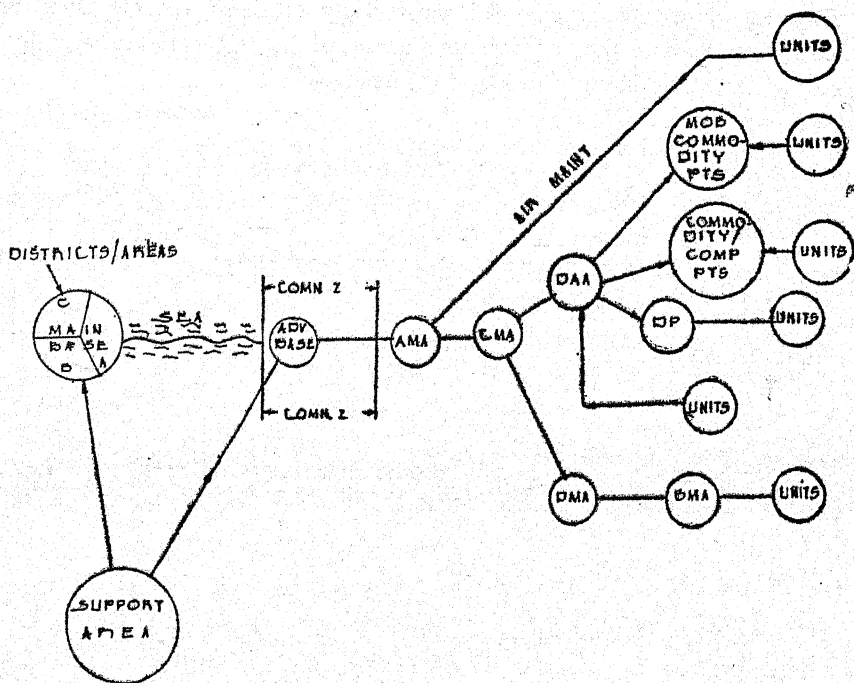


FIG-1 (a)

I prefer to call the above pattern classical because of its excellence and ability to meet various possible situations and because it is a system which has withstood the test of war. Based on this classical pattern, countries can devise their system of maintenance. Let us now see, how the classical pattern applies to our conditions. India has no support areas or overseas commitments. The pattern, therefore, gets simplified. See Fig. 1 (b) below:-

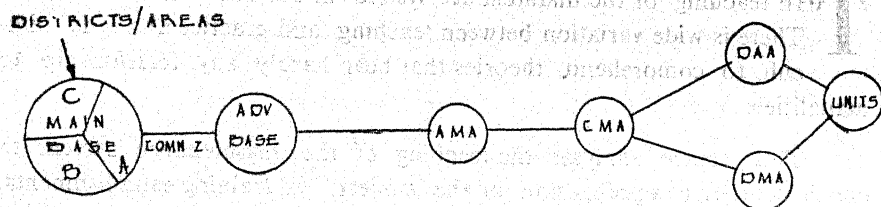


FIG-1 (b)

(Note:- The links between DAA or DMA and units are not shown for simplicity.)

It is generally agreed that within a country, there is no need for Advance Base. In our case, it is particularly so, as the trouble areas are known and peace-time preparations are possible. Our pattern, therefore, gets further simplified. See Fig. 1 (c) below:-

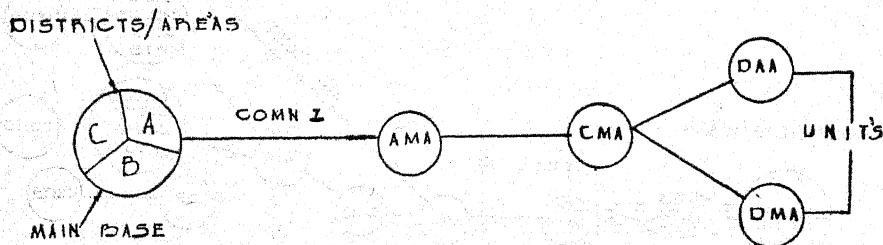


FIG-1 (c)

The pattern, simple as it looks, poses certain problems. Let us examine them.

AREAS AND COMMUNICATIONS ZONE

We have Areas as well as Communications Zone. In Fig. 1 (c), it is merely an extension of Areas. Is there any difference in their functioning? Do we really need a Communications Zone within our country? Why can't we call them Area eg Assam Area.

Look at Fig. 1 (a). In the classical pattern, both Areas and Communications Zones were essential. Areas functioned within the home country whereas Communications Zone performed similar duties in the theatre of operations.

Who is responsible for control on the flow of men and material between the Main Base and theatre? Under the classical pattern, obviously Army Headquarters exercises control through home districts or Areas. But, under our conditions, Army Headquarters does not control any territory. For operations and administration, the entire geographical area of our country is apportioned to Commands and hence the Commands assume the responsibility for the flow. And so we find both Areas and Communications Zones under Commands performing similar functions.

ARMY MAINTENANCE AREA

AMA by definition and common understanding carries an impression of a geographical area, where stocks of all items are held by temporary or semi-permanent installations. It is difficult for a student to grasp that AMA stretches over hundreds of miles comprising Area or Communications Zones depots in distinctly separate blobs on the map. The term AMA is technically and partly correct as Commands (field armies) also exercise control over Areas and Communications Zones, but to call them AMA certainly requires a stretch of imagination.

CORPS MAINTENANCE AREA

With peace-time preparation, right up to the borders, it is generally appreciated that CMA as a link may not always be necessary in our conditions. What, however, causes confusion is the level of stocks. It is advocated that CMA may hold 2 to 5 days of stocks. The trouble arises when stocks of CMA are compared to DMA which holds 15 days of stocks. There is obviously something wrong.

DIVISIONAL ADMINISTRATIVE OR MAINTENANCE AREAS

The necessity for DAA is easily understood. This link will be always required as it is primarily meant for administrative echelons and units.

In Mountain Divisions, it is common to have DMA. The anomaly in level of stocks between CMA and DMA has already been brought out. Do we need DMAs? Certainly. There is a requirement to hold stocks in the mountainous terrain in the forward areas. But, must they be held by divisional units? Holding of excessive stocks by Corps or Divisional units affect flexibility in their operational employment. Is it, therefore, not

advisable that Area/Sub Area depots hold stocks for the Mountain Divisions? Within our country, there should be no difficulty in locating depots as far forward as divisional areas of responsibility. The administrative units of field formations should remain uncommitted and mobile for diverse employment during wars.

The differentiation between DAA and DMA is not clear. It is advocated that when the level of stocks in DAA exceeds its second line holding, it becomes DMA. Thus, if an infantry division holds two second lines of ammunition, its DAA becomes DMA. Is it really so? If our definitions follow such dichotomy, there will hardly be any DAAs in our country. To my mind, an administrative area is primarily established for administrative echelons and units. It may hold stocks, one or more second lines, as a temporary measure. A Maintenance Area, on the other hand, is established for holding stocks. Thus the difference lies in criteria for establishment; in the case of administrative areas it is units, in the case of maintenance area it is stocks.

From the classical pattern, we are getting closer to the Indian pattern of maintenance system.

But, let us first examine some of our definitions:

THE CONFUSION OF DEFINITIONS

MAIN BASE

The glossary, defines Main Base as under :

"A large area containing the complex organisation which gathers together, holds and issues the men and material needed to maintain the activities of armed forces engaged in war. The area must necessarily be highly developed and will contain all or most of the following facilities: ports, railways, roads, airfields, hospitals, depots for men and material, workshop and other installations, factories, telecommunications, skilled and unskilled civil labour and a civil economy requiring power, light and, if possible, capable of manufacture and the production of local materials and resources. Considerable time is needed for the development of a main base before it will be capable of maintaining large forces. When established, a main base may serve one or more areas of operations."

We teach that under our conditions India is the Main Base. If the main base encompasses the entire country why not call it "a country" or at best "the home country". The word "base" is indicative of an area. One may also ask—if the country is Main Base, where are subsidiary bases? I,

therefore, prefer the word Home Country without forcing a definition on it as Main Base.

COMMUNICATIONS ZONE

The glossary defines Communications Zone as under:-

“Rear part of the theatre of operations (behind but contiguous to the combat zone) which contains the lines of communications, establishments for supply and evacuation, and other agencies required for the immediate support and maintenance of the field forces.”

This is one definition which is most confusing. The term communication zone is indicative of an area between the two boundaries. In our case, Delhi is the rear boundary of some of the field armies. As far as forward boundary is concerned, our Communications Zone penetrates right into divisional areas.

We have already discussed the confusion created by terms Areas and Communications Zone. Within a home and that too in an insular country, there is no requirement for Communications Zone. All our Communications Zones can be called areas without any detriment.

We need to recast the definition of Communications Zone. It may be required if we penetrate deep into enemy territory. Let us attempt a definition. A Communications Zone is an area of captured enemy territory between field formations rear boundary and the home country. Depending on the distance, separate arrangements may be required to control the flow of men and material. Communications Zone in such case will require Communications Zone Areas or Sub Areas for command and control.

ARMY MAINTENANCE AREA

The term AMA is indicative of a geographical area. In our context, why not simply say Area or Sub Area depots or installations?

In case we penetrate deep into enemy, AMA may be required and in such an eventuality the present definition of AMA would be apt.

ADMINISTRATIVE AREAS

The definition of administrative areas is sound except that an administrative area does not become a maintenance area if temporarily

Maj Gen EA VAS, Commandant, Combat College, is of the opinion that the definition should also include areas of operation where normal administrative facilities have not been developed prior to the hostilities

more stocks than one second line are held. The emphasis is on suitability of the area for administrative units and echelons.

MAINTENANCE AREAS

The definition of Maintenance Areas needs a slight change. During the 1971 war, we added a few more terms to our confused terminology, such as RP Control Centre, PMA and three static CMAs in a Corps. All these were maintenance areas created for a subordinate formation by a higher formation. The difficulty in giving suitable and standard nomenclature is once again due to our teaching. According to our teaching, a maintenance area takes its name from the formation who controls and establishes it. Now suppose we alter our teaching and say—a maintenance area will take its name from formation for whom it is meant irrespective of formation and units which man the maintenance area, then all the difficulties will be overcome. There will be no necessity to innovate terms such as RP Control Centre, FMA, CMA No. 1, 2 and so on. Instead they will be simply called as Divisional Maintenance Area. The terminology like CMA No. 1, 2 and 3 and so on will remain reserved for progressive establishment according to our teaching.

This change in the naming of maintenance areas will have wider applicability. It will equally apply to AMAs and CMAs under classical pattern, as formations establish these areas for their own use. It will be applicable if higher formations have to make separate arrangements for lower formations. It will also apply if Area or Sub Area units are required to establish a maintenance area for the field formations.

The definition of maintenance areas should lay emphasis on the suitability of the area for stock holding. We have already discussed the desirability of static administrative coverage for mountain divisions in respect of DMAs.

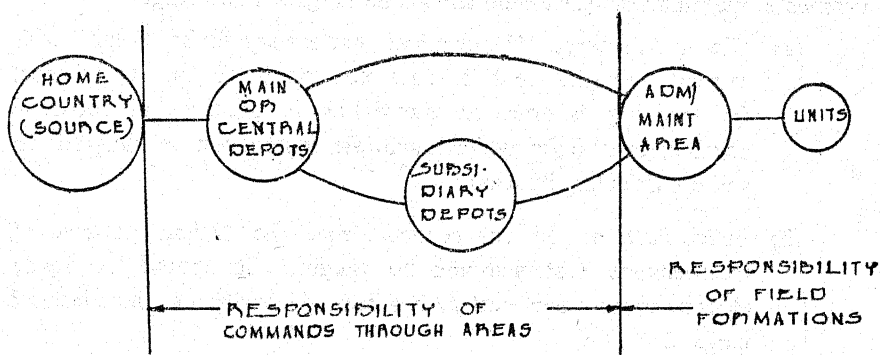
We have evolved a system of maintenance which is logical and very suitable to our requirements. Unfortunately, the definitions do not conform to practice. Well, one may ask what is there in a definition and a term? Nothing if concepts are clear; to students it means confusion.

Let us revise our definitions and bring them in line with practice.

OUR PATTERN OF MAINTENANCE SYSTEM

In the foregoing paras, we have analysed the classical pattern in the light of our conditions and in that process evolved our system of

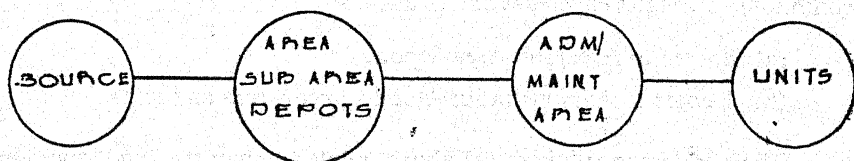
maintenance. We have also seen the necessity of revising some of our definitions. All that we need now is to draw a model of our pattern. See Fig. 2 (a):-



FIG—2 (a)

The model is simple. We have only to explain source. A source may be for raw materials, finished products or imported equipment which find their way to depots.

Indeed our maintenance system is as simple as shown above. We have forced certain definitions which do not fit in our context e.g. Main Base, Communications Zone Areas and AMA. If we call Communications Zone Area as peace-time Areas and all depots (reserve, central, command and so on) as Area or Sub Area depots and correctly so, then our maintenance system will be as simple as shown in Fig. 2 (b):-



FIG—2 (b)

Our peace-time maintenance system is simple. It is from source—depot/installation—units. (An installation may be such as workshops, hospitals, farms and so on.) In the interest of simplicity and flexibility, our war system of maintenance should be as close as possible to the peace-time system. We need to open only one additional link i.e. administrative maintenance area between the depots and units.

Within the country and under our conditions there is no necessity to dovetail Air Force maintenance system with that of Army. And rightly it does not happen in practice.

THE METHOD OF INSTRUCTIONS

We can now advocate the method of instruction. In training establishments, the maintenance system should be taught in two stages.

- (a) *Classical Pattern*: The classical pattern should be taught with explicit remarks that it does not apply to our conditions. Its teaching is, however, essential as it provides all possible combinations from which a suitable system can be derived to suit a particular situation.
- (b) *Indian Pattern*: In the second stage, the Indian pattern of maintenance system should be taught. It should be made clear as to how our pattern has been derived from the classical pattern.

Before teaching our pattern, it will be necessary to revise some of our definitions. Let us also bring consistency in our teaching and practice.

The pamphlet Administration in War volume III has made a breakaway from the old teaching. It needs revision.

A LOOK INTO THE FUTURE

An important function of all teaching is to provide an insight into future developments. The maintenance system is normally taught under two divisions i.e. Base to AMA and AMA to forward units. Under our conditions, the logical divisions are as under:-

- (a) Source to Area/Sub Area depots.
- (b) Depots to Administrative/Maintenance Areas and units.

The problem in sub para (a) above relate to smoother and speedier flow of replenishments. In this field, the future developments are likely to be restricted mainly relating to faster and reliable system for flow, better storage and inventory control.

The problem under sub para (b) relates to distribution. In this field drastic changes are likely to take place in the future and are worth examining.

Under the existing system, unit vehicles are required to go to various areas within a DAA or DMA for collection of their requirements i.e. supply point, petroleum point, field park company, ordnance field park, postal unit and so on. It would be economical, time-saving and convenient if

formation or unit requirements are placed at one central point. This system has obvious advantages. But, amongst certain pre-requisites, the most important is reliable signal communications so that units can communicate their requirements in advance. We will have to wait for better system of communication—say plan AREN. The next step may be containerisation, where unit requirements are packed in a container. The problem will still remain for full vehicleloads, mainly engineer stores and ammunition. A step ahead will be delivery to units in their own area which, amongst other things, will economise transport and manpower.

The changes in the method of distribution is closely linked with the developments in signal communications and transportation agencies. Such changes will inter alia involve change in command, control and organisation of administrative units.

CONCLUSION

There is a requirement to revise our teaching of maintenance system. The teaching correctly leans heavily on experiences gained during World War II, but unfortunately in that very process, it loses sight of existing system.

Our system of maintenance is logical and has been derived from the classical pattern to suit our conditions. It has been evolved, based on our experiences of post-Independence wars on our borders. The most significant aspect of our system is its adaptability from peace-time to war conditions and vice versa.

The peace-time maintenance system is simple. It is from source—Area/Sub Area/station depots—units. In the event of war, we need only one additional link i.e. maintenance or administrative area between depots and units. Unfortunately a simple system like this is made difficult by incorporation of terms such as Base, Communications Zone and AMA which do not apply to our conditions.

Our pattern of maintenance system is indeed very simple but the teaching does not make it explicit. There is need to revise some of the definitions. The effort required to bring in consistency in teaching and practice is little and is worth making.

PRINCIPLES OF MILITARY INTELLIGENCE

COLONEL R.S. CHOWDHARY

INTRODUCTION

A principle is a fundamental truth or law from which other doctrines and theories spring. The word principle, when used in the context of its applicability in the Services, should not be mixed up either with tactical doctrines or operational requirements. There can be a number of adjuncts to a principle, in the form of maxims or theorems but surely all these adages and percepts don't go any further than the line of epigrams or dictums. Whether it be the Principles of War or the Principles of Intelligence, all must have some essential ingredients. Consequently, the principles adopted can't widely differ from one country to another. There is no doubt that modern Intelligence, being a comparatively less explored science, hasn't so far crystallised its bases. The base, however, does exist starting, probably, from the study of Sun Tzu who wrote in 'The Art of War'—

“If you know the enemy and yourself you need not fear the result of hundred battles. If you know yourself but not the enemy, for every victory you will suffer defeat. If you know neither yourself nor the enemy, you are a fool who will meet defeat in every battle.”

EVOLUTION OF A PRINCIPLE

A principle must be based on widely known doctrines and must be universally acceptable. Take the question of Principles of War whether evolved by Foch or Fuller, Julius Caesar or Jomini, Mahan or Montgomery, these in their basic features do not much differ from those set out either by Sun Tzu, Clausewitz or Napoleon. In each case, it generally means the maximization of the same basic truths.

A doctrine or a theorem, to be accepted as a principle, must have some essential components. These basic ingredients are enumerated below :—

- (a) A principle must be based on widely known and practical doctrines.

- (b) A principle must embody tactical doctrines and functional requirements and should not be a substitute for any one of these.
- (c) A principle must be of general importance and of widespread application.
- (d) A principle must provide broad guidance for actions in most situations.
- (e) The basic idea behind a principle must be simple and easily expressible.
- (f) A principle as applicable to us in the Armed Forces should not get involved in legalistic and philosophical technicalities.

It would be apt to imply that the Principles of Intelligence can be no exception, to those of the Principles of War and will have to be based on universally known doctrines and fundamental truths widely practised over the centuries. Whether it was Alexander the Great defeating the superior Persian Force at Arbela in 331 BC or the victory of Frederick the Great over the French at Rossbach in 1757 AD, the basic reason for the victory on one side and the defeat of the other remains the same and that is, effective use of intelligence by one and ignorance of the other.

PRINCIPLES OF INTELLIGENCE

SELECTION AND ANALYSIS OF INTELLIGENCE PROBLEM

Like Principles of War, the first and probably the most important requirement of Intelligence operations is the 'Selection and Analysis of Intelligence Problem'. Let it be any level, from national to field commander's, the careful selection and subsequent analysis of the Intelligence Problem remains vital. Unless the national planners are clear what their strategic intelligence requirements are in respect of various countries and the selected spheres there in, no Intelligence sources, agencies or organisations can function effectively. Once the Intelligence problem is clear, it has to be analysed, so as to break it down in a manner that the Intelligence collection machinery can be put into operation to acquire the information/intelligence required.

Besides, whether it is the requirement of Sun Tzu for maximization or of Alexander and Frederick for prior knowledge of the enemy, the need for intelligence continues to be guided by the requirements of a country or a commander who wants to use that intelligence. Consequently, the first and the most important thing in any Intelligence operation is to know the needs of the country or a commander.

To bring the concept down to the tactical level, it would mean, Intelligence must meet the needs of commanders. Like all countries all commanders don't need the same intelligence. Intelligence to be of use must be relevant. in relation to place, time and circumstances, to the requirement of a nation or a commander and in the context of existing international, political and military situation.

This, thus, gives birth to the foremost principle of Intelligence and that is, 'Selection and Analysis of Intelligence Problem'.

TIMELY RECEIPT OF INTELLIGENCE

This is a self-explanatory principle which implies 'intelligence delayed is intelligence denied'. We know today that the main reason for the successful retreat of Lee's defeated army at Gettysburg was the oversight on the part of General Meade of the principle of 'Timely Receipt of Intelligence'. We have seen that Intelligence is needed by countries and commanders for specific purposes. It is, therefore, essential that intelligence should reach in time to be of use. To ensure this, acquisition of information has to be planned in advance anticipating requirements and continuously acquiring it in time and in a most economical manner. This requires deep understanding of all available sources, their reliability, credibility, limitations and strong points. Understanding on the part of the collecting agencies, of the intended use of the intelligence and the purpose for which it is acquired, helps in balancing the need for accuracy with that of the timely receipt.

Intelligence operation unless they result in timely provisioning of intelligence are of little use. This, therefore, brings us to the second principle of Intelligence and that is 'Intelligence must be Timely'.

INTELLIGENCE CYCLE

Information to be of any use has to be converted into Intelligence and for this, the raw reports have to go through a well-defined process which is known as 'Intelligence Cycle'. Basically all Intelligence operations must follow a simple cycle which should be based on the requirements of a country or the mission of a commander. This Intelligence cycle consists of—

- (a) Defining the aim of the Intelligence problem, to arrive at the information that would be required;
- (b) Collection of information;

- (c) Collation (putting together) of information;
- (d) Interpretation and synthesis (converting information into intelligence); and
- (e) Dissemination (timely distribution to those concerned) of Intelligence.

No information is of use, unless, it goes through the process of 'Intelligence Cycle' keeping in view the first two principles, that is, 'Selection and Analysis of Intelligence Problem' and the 'Timely Receipt of Information'.

In this connection the following two aspects merit mention :—

(a) Logical Reasoning

It is one of the main functional requirements of interpretation which actually is a corollary to the principle of 'Intelligence Cycle'. This should never be lost sight of, as, it assists in converting information into Intelligence.

(b) Intelligence Channel

The functional requirement, that the information should pass through Intelligence channels should always be adhered to, purely for working convenience. It is one of the derivatives of the 'Intelligence Cycle' and is embodied in it as its essential ingredient.

SECURITY

Security occupies an overwhelmingly important position when applied to Intelligence operations. It covers the following aspects :—

(a) Counter-Intelligence

It deals with all the steps that are taken for the protection of information from spies, personnel against subversion, installations and material against sabotage and operations against disaster. It broadly covers all actions aimed at destroying the effectiveness of the intelligence activities of a real or potential enemy.

(b) Security of 'Sources'

The necessity of protection of a 'Source' is not generally well understood. Loss of a 'Source' will not only deprive a nation of a means of procuring information but 'own source' in enemy's

hand is a great security risk as all human beings break down at various stages.

(c) The Requirement of Need-To-Know

This security requirement is essential to safe-guard intelligence from falling into unauthorised hands, may be inadvertently. Nobody should be given or should possess any classified information unless his need to know has been established.

Unfortunately, the most important aspect of any operation, is both least understood and observed. Intelligence operations must be conducted in a manner that they do not in any way jeopardise the operational plans. Imagine the ensuing disasters if the security cover was not available either for the landings in Sicily or for Operation Overlord and the enemy had been waiting for the Allies. Intelligence collection plan must be executed in a manner that it gives no indication of the impending operations. If prior to the landings in Sicily all Intelligence collecting agencies had diverted their attention to the beaches of Sicily, the Germans would have had no difficulty in deducing that the next thrust would be on Sicily. Instead, this requirement of Security was not overlooked and the Germans did not know whether the Allies were landing in Sicily, Sardinia or Southern France. It not only implies denial of information but at times projection of wrong information becomes essential for the security of operations. These aspects of Security are, therefore, very essential, otherwise, they will not only give away the surprise but will mostly result in disasters.

The Japanese attack on Pearl Harbour is perhaps the most outstanding example of the application of the principle of 'Security' in the field of Intelligence. Japanese security was so perfect that whatever little information the Americans could pick up, they were made to believe in its incredibility. We thus arrive at the all-important fourth Principle of Intelligence and that is 'Security'.

CENTRALISED CONTROL AND COORDINATION

If Intelligence is to meet the national requirements, it, of necessity, has to be coordinated and controlled by a Central Agency. Existence of this 'Central Control and Coordinating Agency' is essential for the following reasons :—

- (a) To ensure right priorities in the light of national requirements.

- (b) To avoid waste of effort and duplicity though ensuring corroboration.
- (c) To ensure that the working of one agency does not jeopardise the functioning of the other.
- (d) To make sure that all intelligence of vital national importance is available with a single agency, for planning at the highest level.
- (e) To take on the inter-departmental intelligence requirements.

This 'Central Control and Coordinating Agency' should have nothing to do with the procurement of departmental Intelligence required for Armed Forces, economists, nuclear scientists, sociologists or politicians. These departments should themselves collect intelligence for their use and should function independently. Centralisation should in no way be permitted to violate the important functional requirement of any successful Intelligence set-up, that is, 'closeness of intelligence procuring agency to its users or consumers'. Even within a department it is normally difficult to create the desired confidence between the producer of the Intelligence and the users. There are great barriers to confidence and coordination even when Intelligence is being procured by those in the same set-up. If the acquiring agency is not under the control of the users or consumers, it brings in avoidable difficulties and creates lack of confidence and ultimately defeats the very purpose of an Intelligence set-up. It, therefore, is clear that departmental Intelligence must be fully subordinated and controlled by the respective departments. It thus emerges that various departments like Defence and External Affairs must collect their own Intelligence, as they alone know their exact requirements and in what form and when they need that.

In the 'Central Control and Coordinating Agency' all departments should be represented strictly in the ratio of their requirement of Intelligence and the importance of their requirements. If this is not done it would lead to departmental cults, individual fads and scramble for power at the expense of national interest. It is the Armed Forces, External Affairs Ministry, Ministry of Economic Affairs and a few others who need foreign intelligence and as such it is they who should man the Central Control and Coordinating Agency. The major user of the Intelligence should head this Central Organisation. This Central Organisation should permit the Departmental Intelligence Organisations to function independently within established and clear jurisdiction. The Central Organisation should not be in competition with the Departments. As a super body, it should guide and assist when such assistance and guidance

is required. This Body should primarily be to coordinate the intelligence collection operations by means of conferences, departmental cells (within the Central Organisation) and by issuing broad directives in the light of national policy.

To bring down the application of this principle to the tactical level it would mean that all intelligence collecting agencies should be controlled and their work coordinated by Intelligence staff at various levels. This thus brings us to the last principle of Intelligence and that is. 'Centralised Control and Coordination'.

CONCLUSION

Like Principles of War, the Principles of Intelligence have to be broad-based, universally applicable and should so regulate the intelligence functioning that it meets the immediate and long-term requirements of nations and needs of Commanders. The Principles of Intelligence must act as a constant guide for the intelligence set-up to ensure effective acquisition of the desired intelligence, keeping in view the national, operational and security requirements. The following Principles of Intelligence are recommended for adoption in our contry :—

- (a) Selection and Analysis of Intelligence Problem.
- (b) Timely Receipt of Intelligence.
- (c) Intelligence Cycle.
- (d) Security.
- (e) Centralised Control and Coordination.

COMBAT INFANTRY ROLE FOR THE ENGINEERS

LIEUT COLONEL SCN JATAR

INTRODUCTION

OUR history is replete with instances where the Sappers been used as infantry. The concept of using the Sappers in infantry role is not confined to British or American tactical doctrines. In 1942, during the Battle of State Farm 79 in Russia, General Black of 11 Panzer Division deployed his anti-aircraft guns and the Engineer Battalion as the holding force while the Panzer Regiment launched the main counter-attack.

Sappers have been used in infantry role more than is known or accepted, and often employed without being supported by other arms. However, most higher commanders feel that Engineers do not need special training or equipment with the result that last minute ad-hoc and make-shift arrangements are made when the Engineers are employed in infantry role.

AIM

The aim of this paper is to analyse if the present authorisation of weapons and ammunition and the standard of training of the Engineers are suited to their infantry role.

I propose to deal with this subject as given below :—

- (a) Necessity for employment of Engineers as infantry.
- (b) An analysis of the authorisation of weapons and equipment and the standard of training of Engineers.
- (c) Some suggestions to increase the organic fire power and the standard of training.

NECESSITY FOR EMPLOYMENT AS INFANTRY

The need to use Engineers as infantry is felt the most when troops are inadequate or at the start of a war when the initiative is with the enemy. Infantry formations and units have to occupy greater frontages

than what they are capable of. To plug these large gaps and more often to provide depth to the defences, Sappers are required to hold ground. The necessity also arises when we have to occupy large chunks of conquered territory. The situation gets more accentuated in mountainous terrain where our static defence is more vulnerable to infiltration.

EMPLOYMENT AS INFANTRY

Engineers will be employed as infantry in one of the following circumstances :—

- (a) *When the situation is precarious.* A professional battle-wise commander always plans for a last-ditch battle with his last reserves. This last reserve is the Engineer Regiment.
- (b) *When the ground to be denied to the enemy is extensive.* In both 1965 and 1971, engineer regiments were in a ground-holding role once the defensive battle was joined.
- (c) *Counter—infiltration.* A commander may prefer a counter-infiltration role for the Engineers to the ground-holding role when infiltration threat is large and the intelligence poor.
- (d) *Self-protection.* Sappers may be attacked while engaged on engineer tasks or in harbour.
- (e) *Patrolling.* There were many instances in the last war where the Engineers had to carry out patrolling without infantry support.

RELIANCE ON OWN ORGANIC WEAPONS

It will be apparent from the above sets of circumstances that the Engineers have to rely on their own organic fire power in most cases. In the divisional administrative/maintenance area, the field park and headquarters companies of the engineer regiment are the only combat arms sub-units on whom a considerable burden of protecting the area falls.

THE CHANCES OF SURVIVAL

SCALE OF WEAPONS AND AMMUNITION

A comparative statement of the scales of weapons and ammunition of the engineer regiment vis-a-vis an infantry battalion is at Appendix A. The following deficiencies in the engineer regiment are striking :—

- (a) Deficiencies in first and second-line scales of ammunition.
- (b) Deficiencies in hand-grenades.

- (c) Absence, of MMGs. 2-in mortars, rocket-launchers, pistols signal and bayonets.

SECTOR STORE

It was found in the last war that ad-hoc and makeshift arrangements do not succeed. For the Engineers to depend entirely on Sector Stores which are also required for regular and para-military units, is evading the main issue because Sector weapons are already committed in many cases. A case in point is of signal pistols which are not authorised to engineer regiments. Is it some new and modern concept to deprive the defender of this important requirement ?

COORDINATED FIRE PLAN IN DEFENCE

The most effective method of breaking up an enemy assault is a well-coordinated artillery and mortar defensive fire plan. To fight a successful defensive battle, therefore, engineer regiments must have mortars integral to them. We have, however, to establish whether the Engineers should have 2-in or 81-mm mortars. With artillery acquiring more of the bigger calibre mortars, 120-mm mortars may well be given to the infantry. Should 81-mm mortars be given to the Engineers in that case ? To be proficient in their use, a mortar platoon will have to be created in an engineer regiment. No ad-hoc system can work. Forming mortar platoon will not only take away the much needed technical manpower from other Sapper tasks but will also add to the multifarious activities the Sapper has to train for. These arguments are also applicable for authorising medium machine guns and 106-mm recoilless guns to an engineer regiment although their necessity is unquestioned.

AUTHORISING 2-IN MORTARS

2-in mortars are simple to operate and do not require specialised training to the extent 81-mm mortars do. 2-in mortars are very effective in defence for battelfield illumination. One 2-in mortar per platoon is presently authorised to parachute field companies and the same scale of 2-in mortars should be authorised to all engineer regiments. However, the need for artillery to be in support of the Engineers will always remain.

MEDIUM MACHINE GUN

Long fields of fire are seldom available in the mountains and hence, the main advantage of the medium machine gun in mountains is its greater rate of fire. With the introduction of the multi-purpose belt-fed machine gun (under development) which can be used both as medium and light

machine gun by changing its mounting, there will be no need to authorise medium machine gun to the Engineers.

ANTI-TANK RESOURCES

No defender has any chance of fighting a successful defensive battle without adequate anti-tank resources. This is not to suggest the authorisation of 106-mm recoilless guns which require wholetime specialist training. The idea of having a reconnaissance and support battalion integral to the infantry division is gaining support in our Army. Should this come through, the infantry division will always have adequate number of 106-mm recoilless guns for allotment in the Engineers. It may also be worthwhile to authorise RPG—7 to the Engineers as an experimental measure in view of its simple operation and to cater for the eventuality of a reconnaissance and support battalion not coming through. If this is accepted, selected engineer NCOs will have to attend the RPG leg of the battalion support weapon course at the Infantry School.

BAYONETS AND HAND GRENADES

There is some loose talk about the term 'offensive' as applied to bayonets and hand-grenades. I do not see how one can draw a line between offensive and defensive uses of these two and brand them as either purely defensive or offensive. It is very much in our teaching to use hand grenades in defence and the versatile use of the bayonet is well known to all of us. Napoleon Bonaparte is reputed to have said that you may do anything with bayonets except sit on them.' On our Northern frontiers, the essential battle-winning factors would still be fire discipline, determination and steadiness with the bayonet. There is a tendency amongst us to recommend discarding of the bayonet because of the increased ranges of new weapons. Captain Al Thomsom in his study in the 'Military Review' says that the bayonet can still be used to advantage in close combat fighting, the possession of a bayonet gives the soldier a psychological feeling of greater confidence and fosters the killing instinct, to remove only the bayonet will make very little difference in reducing the weight and saving the soldier from fatigue and that the bayonet has many general duty functions such as cooking and wood chopping etc. which go to retain the bayonet in service. In the Chinese Army, the rifle has been fitted with a detachable knife-type bayonet which can be used as a wire cutter and a small saw. In our own Army, I have known of instances where bayonets have been used as mine prodders by the Engineers in critical situations. When the bayonet is such a fine general purpose weapon, why have the Engineers discarded it ?

ORGANIC WAPONS—FOREIGN ENGINEERS

It would be pertinent to note that the Chinese Army Engineers have their own organic machine guns and mortars. Similarly, American Army Engineers have rocket launchers and M16 rifles with grenade launchers. Pakistan Army Engineers, as is well known, have medium machine guns, rocket-launchers and launchers grenade. Other armies have taken at least some note of the requirement of increased organic fire power for the Engineers. We are perhaps too complacent and only a bloody war will shake us out of this complacency.

TRAINING OF ENGINEERS

The second major aspect of the employment of engineers in the role of infantry is their training. The writing on the wall is clear; unless we train the Engineers in their infantry role, they will not be in a position to deliver the goods in war.

INFANTRY TRAINING

It is necessary that in all training directives and instructions, a special mention is made of infantry training for the Engineers. This training should take the following form :—

- (a) Use of engineers to occupy a defended area in formation exercises.
- (b) Participation by engineer platoons and companies in exercises at brigade and battalion levels. Field/Platoons/companies could even form part of infantry companies/battalions.
- (c) Training engineer officers in directing artillery fire.
- (d) Detailing engineer JCOs/NCOs for the Platoon Commanders' Course at the Infantry School.

OFFICER TRAINING

A Sapper officer rarely gets an opportunity after his commission to do any tactical training except when he attends the Junior Command/Company Commanders' Course or prepares for Part C, Tactical Test. Normally he is already a major and commanding a company in war without having had any worthwhile tactical training. Training with infantry units in formation exercises will go a long way towards giving him the requisite confidence and the know-how of tactics at platoon and company levels. Detailment of engineer officers for the tactical leg of the Young Officers Course at the Infantry School either before proceeding on the Degree Course or after it, could also be considered.

SUMMARY OF RECOMMENDATIONS

WEAPONS AND AMMUNITION

Weapons.

- (a) *Mortars.* Authorise one 2-in mortar per field platoon in an engineers regiment.
- (b) *Machine Gun.* Replace the light machine gun with the multi-purpose belt-fed machine gun, when developed.
- (c) *Anti-tank Resources.* These should be allotted from within divisional resources. With the formation of reconnaissance and support battalions, the problem would be much simpler. As an experimental measure, authorise the RPG-7 to engineer regiments.
- (d) *Other Weapons.* Authorise signal pistols and bayonets as before. Scale of grenades should be increased.

Ammunition. First and second line scales should be brought on par with infantry battalions.

TRAINING

Engineers should be allowed sufficient time for :—

- (a) Training in the occupation of a defended position in formation exercises.
- (b) Participation by engineer sub-units in brigade and battalion tactical exercises. Engineer platoons/companies could form part of infantry companies/battalions.
- (c) Training the officers in directing artillery fire.

Engineers should be detailed on the following courses :—

- (a) Officers for the tactical leg of the young officers course at the Infantry School.
- (b) JCOs/NCOs for the platoon commanders' course at the Infantry School.
- (c) Selected JCOs/NCOs for the RPG leg of the battalion support weapons course at the Infantry School. if this weapons gets authorised to the Engineers.

CONCLUSION

A United States Army Engineer Officer has said, "Ironically, the more critical the combat situation the more difficult the task of the Engineers in an infantry role and the lower the odds that the greatly needed fire support will be available". It is indeed very surprising that when our Engineers are neither equipped nor trained to fight as infantry, they are invariably asked to perform this task in war. To commit them to this role without adequate fire power and training is both unfair and dangerous. Engineers must be allowed sufficient time and opportunity to train in this role. Additional fire power and anti-tank resources must be provided to them.

I have made an attempt in this paper to analyse the capabilities of the Engineers in their role of infantry. The primary role of the Engineers has not been touched; indeed the Engineers are adept at this and carry out on-the-job as well as planned training systematically. A time has now come when we should find ways and means to equip and train the Sappers effectively so that they are able to fulfil their infantry role. Lastly, as Brigadier General Casey, General Macarthur's Chief Engineer, said, "The situation is always critical when a commander has to pull his engineers from their normal mission into combat. A Military Engineer must, therefore, ensure that his men have been given a sufficient degree of combat training to give his men a reasonable chance for their lives, wholly aside from the fact that such training may represent the difference between success, and defeat or failure".

EX-SERVICEMEN'S WELFARE

MAJOR SURENDRA MOHAN

INTRODUCTION

'JAI JAWAN' was once a heady slogan. The men of our Armed Forces responded to the rallying Call of the people by giving of their best. But what of to-day, when the dust of the war has settled ? 'Jai Jawan' is seldom heard now. The service personnel cynically quote the old gingle :—

God and soldier, all people adore,
In time of war, but not before,
And when war is over, and things righted,
God is neglected and an old soldier slighted.

Apart from the odd retired General, who may still hit the headlines, ex-servicemen have perhaps been the least vocal of any group in our country. There are three main reasons for this. First, their ingrained discipline and habit of accepting difficult conditions; secondly, as a group they are small and scattered all over India; thirdly, upto the partition of the country in 1947 they had very little to be disgruntled about. It is only there-after, with the expansion in the size of our defence services and the war experiences in the recent past, that a large number of people are becoming ex-servicemen, either on completion of tenure or being disabled due to war and other reasons.

Ex-servicemen with their personal example of a high standard of discipline, hard work and devotion to service are a valuable inspiration to youth. The Government is obliged to take on the responsibility of their resettlement and welfare, in recognition of their services and as a tribute to their sacrifice to the nation.

The subject is discussed under the following headings:—

- (a) The problem.
- (b) Who is responsible.
- (c) Existing Rehabilitation Organisation.
- (d) Proposed Organisation.

- (e) Responsibilities of Regimental Centres.
- (f) Industrial Training and Rehabilitation Centres.

The aim of this paper is to discuss and suggest means of giving due recognition to the welfare of ex-servicemen with particular reference to the following:—

- (a) Proposals for an effective organisational set-up at Central and State Government levels.
- (b) The part that regimental centres can play in rehabilitating ex-servicemen and how this pre-release training should be organised.
- (c) The need for establishing special training and rehabilitation centres in industrial areas for pre-release training.

THE PROBLEM

SOCIAL ENVIRONMENT

Until World War II, the soldier was recruited from certain well-defined communities and the yeoman farmer class, generally known as the martial classes". The jawan joined the armed forces because it was in the tradition of his clan to do so. While he served, his share of land was looked after by his father or some other relative. He saved most of the small pay he got and sent these savings home regularly. On retirement he brought home a small token pension, frequently with a further grant of land. In the restricted pattern of recruitment and the prevailing joint family system, this arrangement was ideal, but received a rude shock when the social environment changed in the mid-forties; recruitment became more broadbased and the joint family system began to disintegrate. Pension now became the main source of livelihood and not pocket money as it was until then. At the best of times, the pension was not enough for a family to 'make both ends meet'. With the spiralling high cost of living the pension has become woefully inadequate.

A JOB IS NECESSARY

No ex-serviceman wants charity; he needs a means to earn his livelihood. A job on leaving the service now appears essential to most ex-servicemen if they are to survive with any standards at all. The main difficulties encountered in finding jobs are, the acute unemployment in the country; late age to start a new career and the problem of skills. The techniques learnt during a service career are not immediately useful in

civil life. Further, even trades which are akin to those in civil life are not accorded the recognition they deserve.

Resettlement does not end with finding a job or providing financial and other assistance to needy ex-servicemen, but in equipping them to play a more meaningful role in economic activities. Society owes a debt to its valient soldiers and their dependents.

UNSUITABLE AGE

The requirement of keeping the Armed Forces young and active necessitates the release of personnel at an early age. Most soldiers, sailors and airmen after ten to fifteen years of colour service are released or transferred to reserve establishment and are mostly in their thirties. This means that in the middle of their careers they are left "high and dry" and have to find alternative employment; certainly not the best age to get a new job. Employers are also reluctant to take reservists who have to be away for certain periods of training every year. To maintain a high level of morale and to ensure that the right type of people are attracted to a career in the Armed forces, it is necessary to provide assistance and facilities for their resettlement on completion of military service as also for the care and welfare of their families. Apart from the able bodied ex-servicemen there are about 3,500 disabled personnel for whom special efforts are required.

WHO IS RESPONSIBLE

MORAL RESPONSIBILITY

The Armed Forces play the most vital role in the nation's life. In times of need every one looks upto them as saviours of life and property, but once the emergency passes, the hero of yesterday is forgotten. Officers and men retire early exclusively in the nation's interest, to keep the Armed Forces young. Hence it is the duty of the Government and the whole nation to render the utmost assistance in rehabilitating ex-servicemen.

RECRUITMENT PROSPECTS

About 60,000 servicemen are released every year, of whom nearly 45,000 need resettlement assistance. Most regular officers retire from service between the age of 48 and 52, and Emergency and short service commissioned officers, who are not granted permanent commission are released before they are even 40. About 500 officers are retired or released every year, who with their training and skill, drive and leadership qualities can be gainfully employed in various fields, but they find it hard to find a

job. This large group of discontented individuals is hardly conducive to good recruitment prospects. Service in the Armed Forces is no longer popular among educated young men. The dearth of volunteers has not been actually felt so far because of lack of employment prospects elsewhere. With the number of ex-servicemen rising rapidly, this challenge to our recruitment prospects will soon face us unless longterm remedial measures are taken.

Trained and educated men without jobs cannot be expected to remain immune to undesirable sociological and political pressures for too long a time, especially under the present conditions of spiralling costs. If this happens, the prospects for recruitment will further deteriorate.

WASTE OF TRAINED MANPOWER

The high standard of patriotism, discipline and a sense of responsibility, which are distinctive features of service life, must not be wasted in a country which is plagued by these very ills. It is vital to gear these resources for the betterment of the national economy, social life and these very individuals. Induction of these patriotic and disciplined citizens into various facets of national life will inevitably have a favourable effect on other segments of society.

EXISTING REHABILITATION ORGANISATION

PRESENT ORGANISATION

Under the Ministry of Defence, there is an inter-service rehabilitation agency, the Directorate-General of Resettlement (DGR). The DGR is expected to work in cooperation with the various ministries and the Directorate-General of Employment and Training (DGET) for rehabilitation of ex-servicemen. Reservations of vacancies in Central and State Government services and in public sector undertakings for ex-servicemen have been made at places, but the percentage is as low as 2 at times and all States do not follow even this meagre allotment.

There is no special organisation at State Government level except in Punjab and Rajasthan, where ex-servicemen's welfare is a portfolio of one of the ministers. There are however state Reconstruction Fund Committees headed by the State Governors. Post-War Services Reconstruction Fund (PWSRF) was started in 1942 by the British Government in India with a contribution of Rs 2 per combatant and Re 1 per non-combatant per month. After the war, this contribution was discontinued and the accumulations were placed at the disposal of

provincial governments for the welfare of ex-servicemen. These committees decide on the method of spending this fund. Some of these committees have done useful work but many have been lethargic and passive.

At the district level is the oldest official agency, District Soldiers, Sailors and Airmen Board (DSS and AB), with the Collector/Commissioner as its president and one wholetime secretary.

THE PRESENT EFFORT

A careful study of the magnitude of the problem has necessitated formulation of a new policy and programme. This has resulted in initiation of certain steps which are in a way a complete departure from the traditional way of looking at the resettlement problem. A new direction given to the resettlement of ex-servicemen in early 1973 is now yielding significant results. Resettlement is now more and more oriented towards making the ex-servicemen aware of the usefulness of self-employment. He is also provided necessary training facilities and other technical and financial assistance to face new tasks.

The Directorate of Resettlement, alive to the increasing difficulty of resettlement of ex-servicemen, took some initial steps in 1973 to make a three-pronged attack, through a concerted drive to educate ex-servicemen that self-employment provides more enduring resettlement for them. Actual assistance in self-employment ventures e.g. agricultural assistance by land, tractors and other inputs, petrol, gas and kerosene agencies, Jai Jawan stalls for the disabled etc. was also accorded.

Apart from motivation in this new field, the Directorate of Resettlement has taken care to initiate simultaneously training programmes, more in line with self employment opportunities.

Training in 1973 reflected a clear bias towards self employment. Over 250 officers received training in industrial entrepreneurship, industrial management etc. The training was arranged with the cooperation of Small Industries Service Institutes, all over the country. Courses in export marketing and management and post-graduate diploma courses in industrial and business management were also organised. Correspondence courses leading to the degree of Master of Business Administration with recognised universities were also launched. Training in agricultural and farm management was organised with agricultural universities and at State Farms Centres.

As in the case of officers, the emphasis has been on self-employment. Various pre-released and pre-cum-post released training schemes were

arranged for training about 2,500 men in 1973. Training was imparted in agriculture and allied activities. The success of the pilot training course in life insurance has led to organisation of 14 similar courses in various centres for JCOs and NCOs in the army and equivalent ranks in the Navy and Air Force. Training was also given to Jawans in different crafts at the ITI's. Courses in TV technology were also planned. The disabled were also suitably resettled through about 100 Jai Jawan stalls.

The Directorate General of Resettlement, however, has drawn-up ambitious plans for more active and coordinated assistance such as preparation of viable projects, obtaining of credit facilities through nationalised banks and other financial institutes.

SHORT-COMINGS OF THE PRESENT ORGANISATION

The Directorate-General of Resettlement has undoubtedly been working with enthusiasm and deserves commendation for the work output in 1973, but it fights a lone battle. It has no Governmental status like the Directorate General of Employment and Training and has to depend entirely on goodwill, cooperation and charity of the [other ministries and the Directorate-General of Employment and Training.

Although certain reservations of vacancies in various jobs has been made for ex-servicemen; no machinery exists to ensure that these jobs have actually been given to them. In a large number of cases, these reservations have been ignored. In fact, no organisation exists at the State government level for ex-servicemen's welfare except in the Punjab and Rajasthan.

The usefulness of the District Soldiers, Sailors and Airmen Boards largely depends on the zeal and enthusiasm of the local collector/commissioner and the time he has to spare for the ex-soldier,

The Many useful qualifications of individuals, both professional and others, are not recognised for civil life. A modest beginning has, however, been made in this regard.

PROPOSED ORGANISATION

CABINET COMMITTEE ON EX-SERVICEMEN'S WELFARE

This committee should be headed by the Prime Minister, with the Ministers for Defence, Home, Labour and Employment, Commerce and Industrial Development and Tourism as members. They should meet once a year to laydown policy and review the progress in rehabilitation of ex-servicemen. Its directions should be passed to the ministries concerned by

the cabinet secretariat. The Ministry widg of the cabinet secretariat can be suitably strengthened to include a cell for ex-servicemen's welfare.

Some of the important policy decisions which need to be taken in regard to rehabilitation of ex-servicemen are as follows:—

- (a) According to civil degrees and diplomas to various service and educational qualifications. This is vital. Recently, all aircraft trades in the Air Force and certain trades in the EME have been recognised by the universities and in civil life. This should be enlarged further.
- (b) Reservation of vacancies in public sector undertakings and other Government departments. The present rules regarding secondment to these departments, on a voluntary basis only, need revision. Individuals due to retire from service should be absorbed by giving permanent secondment to these departments since this will benefit both the individual and the department. The rules must also give them an opportunity to rise in their new vocations, so as to provide them an incentive to retain efficiency.
- (c) Ex-servicemen are ideally suited for para-military forces and upto 60 percent vacancies should be reserved in these for them. There should be no embargo on their further promotion in these organisations. Similarly a higher percentage of vacancies should be reserved for ex-servicemen in recruitment of peons, lift-men, darwans, chowkidars, etc.
- (d) Waiving of educational qualifications and relaxation of age limit for civil jobs. There should also be a priority for admission into universities, medical and engineering colleges. This benefit is provided for by the law in the United States, the Soviet Union and China.
- (e) Retrenched employees of the Government are accorded the highest priority for rehabilitation in other Government departments. This privilege should be extended to ex-servicemen.
- (f) To ensure compliance of policy directions of the cabinet committee on ex-servicemen's welfare an annual report should be submitted by the various ministries and the State Governments.

WELFARE DIRECTORATE FOR EX-SERVICEMEN

The existing Directorate-General for Rehabilitation should function as an integral part of the Ministry of Labour and Employment so that its performance becomes the responsibility of the ministry enjoying all the

powers to make rules and ensure implementation of labour and employment policies. This will obviate the necessity of the Directorate-General for Rehabilitation working on a solely liaison basis with the Directorate-General for Employment and Training. Both will thus be in the same ministry. The Government's proposal to speed up self-employment oriented schemes in the current financial year will better benefit ex-servicemen through this arrangement.

This organisation, which can be called, "The welfare Directorate for Ex-servicemen," should continue to exercise the functions of the Directorate-General for Rehabilitation, viz, rehabilitation in public sector enterprises, Government departments including para-military forces, provision of personnel to private industry, assistance in setting up smallscale or cottage industries and rehabilitation on land.

STATE GOVERNMENT CALL FOR EX-SERVICEMEN'S WELFARE

There should be a small cell working directly under the Chief Minister to attend to the problems of ex-servicemen in the same manner as the welfare Directorate for Ex-servicemen at the Centre. The recently introduced Armed Forces Liaison officer (Brigadier or equivalent) at each State Government headquarter can be the nucleus for this cell. He can be assisted by a few other ex-servicemen, both officers and other ranks.

Some of the departments under the State Government in which ex-servicemen can be absorbed without elaborate training are state police, civil defence, home guards, state transport etc. A proportion of vacancies, say 30 per cent, can be reserved for ex-servicemen. No gainsaying, it does not preclude their employment in other vocations after a measure of training.

ARMED SERVICES BOARDS

Armed Services Boards with the Commissioner of a division as chairman, and an ex-serviceman as secretary should be established. This officer can function as a liaison officer to the commissioner. At the level of a division the members should be all district magistrates and a few ex-servicemen. There should also be a representative of the appropriate Sub. area Headquarters as a member.

The main functions of these boards should be :—

- (a) Assistance in administrative matters connected with ex-servicemen and their families.

- (b) Publicity of educational facilities and other concessions for ex-servicemen and persuading them to make use of them.
- (c) Help in settling court disputes involving both servicemen and ex-servicemen by providing expert advice and procedural guidance.
- (d) Assist in rehabilitations of ex-servicemen on land and in industry.
- (e) Investigate cases of disability and recommend allotment of pensions and arrange for care of those invalidated out of service. through the Red Cross and other agencies.
- (f) Check the progress of work of District Soldiers, Sailors and Airmen Boards.

By introducing this board at the divisional level under the commissioner. it is anticipated that the district magistrates who preside over the District Soldiers, Sailors and Airmen Boards will have to take greater interest in this aspect of their responsibility. Presently, this is treated as an unnecessary burden by a majority of district magistrates.

RESPONSIBILITIES OF REGIMENTAL CENTRES

REGIMENTAL CENTRES FARMS

Our regimental centres have vast sums of money in their private funds which are generally invested in Government securities at nominal rates of interest. Large investments are avoided elsewhere, possibly due to the following reasons:—

- (a) Limited piece of land that can be spared in the centre area for farming.
- (b) The binding orders regarding the investment of private funds in Government securities only.
- (c) A cautious attitude in avoiding an investment elsewhere and thus the possibility of incurring any loss.

Defence Headquarters must lay down a policy that these funds should be invested on lucrative and employment creating projects. Farms can be set up for agriculture, poultry dairy products, livestock breeding, fruits, piggery and the like. State Government's assistance can be obtained in the allotment of land, either free or at a nominal cost, implements, machinery, development loans etc. as in the case of cooperatives. The running of these institutions must be purely on a commercial basis with the wages of the employees linked to production. Apart from providing employment to ex-servicemen these projects will provide good training centres for pre-release training in self employment.

INDUSTRIAL ENTERPRISES

A gainful proposition of investing the Post-War Service Reconstruction Fund (PWSRF) would be in various industries such as textiles, sugar, tobacco etc. In 1951, General Ayub Khan, as the commander-in-chief, Pakistan Army, invested the proceeds of the PWSRF in Fauji Textile Mills, Jhelum and realised its benefits, both financially and in creating job opportunities for ex-servicemen. Later this was extended to other fields and the various regimental centres now own cereal manufacturing, sugar, tobacco and flour mills in Pakistan. Similar ventures can be started by our training centres with funds at their disposal and with assistance from PWSRF.

ORGANISATION OF PRE-RELEASE TRAINING

Where major projects, envisaged above, are established by the regimental centres, they can be suitably used to give pre-release training to all ranks. Even where such projects are not established it is not difficult to organise training in some of the vocations like tractor driving and maintenance, poultry, animal husbandry, agriculture, fruit and vegetable farming, bee-keeping, carpentry, tailoring, catering etc. What is particularly important is that the syllabus, where possible, must be approved by the appropriate civil department so that diplomas can be issued.

The training period should vary from three to six months and should be combined with the formalities to be carried out at the centre, prior to proceeding on release or retirement. Where facilities of a particular type are not available at the parent regimental centre, an individual should be sent to another centre on duty, as for an Army course. In such cases, this training should be planned in the last two years of an individual's service.

INDUSTRIAL TRAINING CENTRES

ECONOMY OF EFFORT

Should there be separate industrial training centres for ex-servicemen? A soldier's likely reply will be in the affirmative. In a poor country like ours, suffering from colossal unemployment, a low standard of living and a sizeable expenditure on defence, this would be a luxury. There can be no dispute that there should be many more institutions to impart training in business and personnel management, labour relations, textiles, steel, automobile, glass, liquor and beer, canning, leather, hotel management and catering etc. These institutions should run courses and cadres of varying duration and award degrees or diplomas. Industrial Training Institutes in

our country are to some extent fulfilling this requirement by running various diploma courses and each one reserves some seats for ex-servicemen, but a large expansion of varying trades and such institutions is desirable.

Entry to these institutions, which are about 356 in the country at present, is open to every one, but owing to demand outstripping capacity, admission is difficult. The number of seats reserved for ex-servicemen in various trades is not sufficient also.

TRAINING OF ARMED FORCES PERSONNEL

Reservation of vacancies. Approximately 30 per cent vacancies on the courses should be reserved for the Armed Forces i.e. both serving and retired personnel. The percentage of vacancies reserved in a few cases at present is far too low and requires immediate revision.

Payment of Expenses. Training at these institutions should be organised during the last two years of service and all expenses should be borne by the Government, in the same manner as Army courses. In order to limit the number of such courses an individual can attend at Government expense; suitable rules can be framed. Generally, it should not be more than one such course on the choosing of the individual.

CONCLUSION

The retirement age for all ranks is comparatively early in the Armed Forces as against their civilian counterparts, primarily to meet the exacting requirements of physical fitness and to maintain an adequate reserve for mobilisation, if required. This is solely in the interests of national security. The nation must, therefore, take upon itself the moral responsibility to rehabilitate these patriots.

Vast self-employment opportunities are to be generated during the Fifth Five Year Plan. It is a more enduring and satisfying way of resettlement of ex-servicemen, particularly in the context of the difficult employment situation in the country. The Directorate-General of Resettlement should equip ex-service personnel through a well coordinated plan for participation in gainful economic activity particularly in the fields of export, ancillary industries, transport, construction work etc. Orientation of retiring service personnel to self employment techniques would not only add to their income but also help the community at large to benefit from the services of an experienced and disciplined young group of people who have to leave the service at a relatively early age.

Ex-servicemen should henceforth be motivated towards self-employment avenues and provided necessary training facilities. To channelise the interest of ex-servicemen in self-employment enterprises, they should be given technical guidance in selection and starting of enterprises and in obtaining assistance from financial and technical institutions. They should also be provided guidance and consultancy service and extended margin moneys to start enterprises. A more satisfying way of dealing with all these matters lies in the creation of a centralised agency with sufficient executive powers, which could serve as a focal point to meet these varied requirements.

Reservations of vacancies in various Government departments, public and private undertakings will go a long way to minimise the hardship of changing a career "mid-stream." Pre-release training can be organised, both within the service by regimental centres and in the industrial institutes by the Government. The aim of all this training should be to equip the individual with a qualification which will stand him in good stead in his post-retirement life and make him proficient in self-employment.

STUDYING THE HIMALAYAN REGION

HARI DANG

THE Chinese invasion across the high mountains in 1962 brought the Himalayan region into focus for India for the first time. The academic world has, however, continued its specialised pursuit of narrowly defined Himalayan problems within fairly rigid disciplines like Geography, Geology, Meteorology, Botany, Zoology, Entomology, Silviculture, Agriculture, Anthropology and cultural, linguistic and tribal studies.

For the first time, the Himalayan Studies Seminar, organised by the nascent Kumaon University, Naini Tal, recently attempted to bring together specialists in the various disciplines. The success of the seminar lay in bringing attention to bear upon the need for a co-ordinated, regional multi-disciplinary study. The seminarists and their laboriously developed 'papers' and subsequent discussions provided, not only an exciting insight into aspects of the 'ultimate mountains' which the average educated Indian knows little about, but also a clear indication of the meagre state of our knowledge and understanding. The seminarists were content, for the most part, to follow the penchant for specialisation of all academics, and with some outstanding exceptions, the papers dealt competently only with narrow fields and topics like mushroom cultivation, horticulture, 'limnology' and micro-cosmic, micro-regional studies based less on field work than on cross-reference and culling from standard, published works. The conclusions to be drawn were, however, clear, and the seminar recommended the formation of an Institute of Himalayan Studies. Whether such an institute finally comes up under the aegis of Kumaon University, or independently elsewhere, the wealth of information and original spotlight upon problems supplied by the discussions and papers is likely to lead to such a Himalayan study.

PROBLEMS OF ECOLOGY

In some ways, the key-note at the Seminar was a wide-ranging paper on the Himalayan Environment and problems of Himalayan Ecology, where it was pointed out that studies in the Himalayas had so far been intensely

specialised systematics, rather than area or regional studies or inventories, and the urgent need now was to gather together a Himalayan inventory and classification, with the help of earlier reports by explorers, geographers, geologists, hydrologists, botanists, zoologists, entomologists and silviculturists, as well as agricultural and anthropological, social and political scientists. Within the geological time-processes and the great macro-climatic shield-effect of the mountain ranges of the Himalayas, factors were operating increasingly obviously, to bring about, for the first time in history, a deterioration of the environment at 'human' time-scale pace, under the impact of human folly. This paper highlighted the need for an Institute of Himalayan Studies for 'total environmental planning' for the Himalayan region on a comprehensive, inter-disciplinary scale. The other papers pointed out the needs in specialised areas.

Papers on the agricultural potential, particularly in horticulture, crops on arable land, and even in 'cottage' horticultural projects, like mushroom cultivation, were numerous, and hold promise of economic progress for over-populated hill-areas of the foothills.

It is proposed here to give brief excerpts and insights from the more original papers, to serve as a compendium of the Himalayan 'academic' landscape as it was depicted at the seminar. Naturally, the areas neglected by the seminar, like Himalayan wildlife and its conservation, population distribution, trade, area-studies in the North West and Eastern Himalayas, will not figure in this compendium, making it to that extent incomplete.

Dr. P. C. Joshi, a government agricultural scientist, suggested the maintenance of an ideal ratio between plant and human populations, besides improving the breed and output of plants. The art of plant-breeding, based on the science of genetics and the concept of environmental adaptability, has enabled man to resolve his difficulties to a great extent. In the mountains, also, man is helping the natural process of evolution by establishing new ecotypes which, in the natural course, would take a much longer time. New forms have been synthesised for mountainous environments, but we have not been able to develop foolproof measures against plant pathogens, which sometimes cause catastrophic epidemics. There is, at present, a continual fight between science and nature to determine whether man can produce disease-resistant varieties faster than nature can produce new kinds of diseases.

Dr. J.P. Tandon, now with the heritage of the great Dr. 'Boshi' Sen of the Vivekananda Laboratory at Almora, said that the main causes of low crop yields in the hills are: (1) primitive agronomic practices, (ii) lack of

suitable high-yielding varieties, (iii) inadequate use of fertilizers and manures, (iv) lack of irrigation facilities and (v) soil erosion. Know-how to overcome these difficulties exists, and yields can be tremendously increased, provided adequate attempts are made to acquaint the cultivators with the results of latest researches that have been carried out in the field of agriculture. He suggested that the uncultivable lands can be developed into good pasturelands by growing some of the improved perennial grasses and form a good base for the development of a profitable dairy industry. Good scope exists for the development of forestry and fruit production. Seed production of some selected crop plants such as sugarbeet and soybean can bring about an economic revolution.

The standard classification of arable lands under cultivation in the Himalayas should form the basis of better land-use planning all over. Dr. D.S. Jalal defined this, "On the basis of situation, relief, soils and aspects of slope and cultural factors like irrigation facilities, accessibility, mode of cultivation, the arable land of the Himalayas has been grouped in three major classes i.e. good quality low-lying land capable of producing two to three harvests a year; medium-quality land capable of giving one or two crops in a year but with reduced productivity, and poor quality land which has a low productivity. Such a classification helps in assessment of the potentialities of the total arable land and measuring the carrying capacity of the area, thereby suggesting ways for better management of land resources.

Dr. S.S. Taotia, Director of Fruit Utilization, U.P., made a useful contribution: "In ancient days less emphasis was placed on the cultivation of horticultural crops in the hills due to lack of communication and poor irrigation facilities. Temperate fruit cultivation [in these areas started with the advent of British officers and retired settlers from other countries or those who were familiar with temperate fruit orcharding in foreign countries.

On the basis of the success achieved by some of the enterprising Europeans in temperate-fruit cultivation, the government started Government orchards at selected stations in the 19th century. Unfortunately due to lack of experience, many of the trees planted initially could not come to maturity. Various problems. e.g., heavy rains followed by long spells of drought, diversity of soil conditions, varying terrain and altitude, proved fatal to the new orchards. For solving various problems faced by the orchardists the Hill Fruit Research Station, at Chaubattia, in Ranikhet, was established in 1932. It may be noted that this research station is not only the first on temperate fruits in South-East Asia, but has continued to work

with excellent results which have framed the guide-lines for research work being done in other States. The research station has about 200 publications to its credit and is a training centre for extension development workers, orchardists, etc. Trainees from Nepal, Afghanistan, Sikkim, Bhutan, Manipur, etc. have also been trained at Chaubattia.

In the paper on "Himalayan Environment and Problems of Himalayan Ecology", I explained that "Life on the Indian sub-continent and the neighbouring countries is powerfully influenced by the Himalayan environment. The vast mountain ranges of the Himalayan complex protect us from the arid cold and desiccated interior of the Eurasian land-mass.

To speak of the Himalayan environment and to attempt an assessment of its decay or deterioration, to visualise the repercussions of such a process and its impacts on our lives in the plains and the peninsula, is to enter a field of study which is vast, and covers over a dozen sciences in its inter-disciplinary ramifications. This is an untapped and unexplored field. Much of our work, so far, has been specialisation in specific areas of Himalayan study like geography, geology, geomorphology, glaciology, zoological and botanical systematics, and travel studies.

But a student of the Himalayan environment needs to be a generalist in all these disciplines and a specialist in co-relative ecology. In fact, an inter-disciplinary wizard with a very wide grasp and imagination, as well as the patience of job and the stamina and breath, to boot, of the Abominable Snowman, at home in all the varied climatic extremes of these vast mountain ranges.

THREAT OF WATER FAMINE

Not only is this country increasingly utilising more and more of the water of the Himalayan rivers for power generation, for irrigation, industry and human consumption but also the actual volume of water, from one season to another, descending down these valleys, is showing signs of reduction. This is clearly disastrous for the sub-continent's future. A water famine is in the offing, and can overtake us within this century, or soon thereafter. This is not the voice of a Cassandra without scientific realism.

The denudation and degeneration of the forest cover of the mountain ranges has already led to serious problems of erosion all over. Not only has this erosion led to a decline in soil fertility in the mountains but

also to an increase in the frequency and magnitude of the floods of the Gangetic and Indus plains, even as our dams and canals, barrages and projects, render river valleys incapable of canalising the flooded streams. Floods are filling up our dams and silting up our rivers and canals faster than we can build them or deepen them. The vast expansion of roads which cut across the natural drainage of the submontane plains are an additional disturbance to the natural ecology of the country.

Dry winds absorb moisture rapidly. There is a whole etymology of the hydrologist which has not even begun to be applied to the Himalayas. This must be done and the effect of hot winds, plantation of eucalyptus de-forestation of the 'terai', and erosion of the high ridges, must be studied in the Himalayas to enable ecological planning and water technology to be brought into line with our development programmes.

What is needed, as a first step, is to organise a large-scale comprehensive, inter-disciplinary approach to the Himalayas and associated mountain ranges. From this will follow definition of the areas of maximum need, which can be made the subject of specific Himalayan planning to save South Asia from declining productivity and environmental decay.

Dr. V. K. Gaur, an American-trained geologist from Roorkee University, in his paper on Plate Tectonics, and the Physics of Earth processes in the Himalayas, said, inter alia, "The Himalaya are a classic example on the globe, of continental plate collision marked by high seismicity and perpetual earth deformation. Being the junction of two plates, they are most likely the repository of rich mineral resources and geothermal energy. But a successful exploration and exploitation of these must await a clearer understanding of the complex earth processes operating in the region. Another serious gap in knowledge relates to the physical properties and structure of soils and of the ground and surface water regimes as well as of vegetation in the region. As is belatedly realized today, the solution for preventing soil erosion and consequent rapid silting of reservoirs constructed at great cost, lies in systematic management of soil and groundwater in the upper reaches of the streams, that lie in the Himalayas. Other aspects of human activity, e.g., road construction, urban and industrial development have similarly flourished on unscientific lines in the hill areas, thereby coming into conflict with the subtle earth processes and becoming counterproductive. An integrated approach to the study of earth processes that control the physico-chemical environment of mineralised zones, of ground and surface waters, of the stability of hill slopes and of earthquakes and earth deformation, should therefore, constitute a valuable contribution towards the advancement of fundamental knowledge as well as

socio-economic benefits to the nation in general and the people of the hill areas in particular.

Dr. K. S. Bhargava, a Botanist, mentioned the topographical division of the mountains. Tarai and Bhabhar region (155-914 metres), Submontane region (914-2133 metres) and Montane region (2133-3350 metres), with yearly rainfall ranging from 5 cms near Tibet to as high as 500 cms in the East, and 40 cms in the North-West Himalayas, and Dr. D.D. Awasthi of Lucknow University, pointed out that the hills of the Indian Himalayas are being depleted of their botanical resources rather indiscriminately and at a much faster rate than two decades back. There is apparently no planned programme for the replenishment or regeneration of the flora than what is done by the forest departments in their own areas of control. There is an urgent need for the assessment of the depletion of the flora in terms of quantity, variety and causes of depletion. This has to be followed by an intensive programme for the conservation of economically important plants as well as those plants that form an aesthetic, ecological and environmental asset. The stopping of denudation of the areas has to be given priority which has to be followed by the conservation of the plant taxa that are on the verge of extinction due to careless exploitation. There is no need to be overenthusiastic in exploitation of the plant resources without a plan for their conservation, lest the coming generation may blame us for handing them over the bleak, denuded, vegetationless hills as has already happened over vast areas of Garhwal and Kumaon. Certain areas may have to be preserved as National Parks for the preservation of the natural flora of the Himalayan region.

INTEGRATED DEVELOPMENT

Mr. B.P. Maithani from Pithoragarh in his paper on Area Development explained that "Integrated area planning implies that the basic resource components of an area be utilised in a co-ordinated and most profitable way. When considered in the context of the Himalayan region there can be two possible ways of organising the geographical space for purposes of integrated development of the resources, economy and the people there. One is the river basin approach, the other is the growth centre approach."

His paper attempted to synthesize the two approaches to suggest that these two frameworks are not necessarily alternatives and more often than not the central place concept could be applied as a complimentary part within the overall framework of the river basin system. The pattern of growth centres and their spatial arrangement in such a system is visualised as strung along the transport routes which in turn generally follow the

course of the rivers; thus a river basin system organised into a hierarchy of growth-promoting centres and their complimentary areas, possesses the essential attributes of integrated area planning in the hills.

Once this is achieved the efficient utilization of a region's resources will depend on the comprehensive resource inventories for an understanding of their precise quantity and further on the adoption of the appropriate techniques of their utilisation and management.

In an original paper on Himalayan hydrology, outstanding for its original contribution based on field research, Dr. B.P. Ghildyal of the G.B. Pant University of Agriculture and Technology, Pantnagar, outlined major soil and water problems of the Himalayan Region like water-scarcity, soil-erosion and dwindling soil-fertility, crop and forest productivity. He, further, highlighted the causes of these problems which are further aggravated by over-grazing of pastures and scant-vegetated slopes, indiscriminate deforestation and gross misuse of land-resources, and the possible measures for conserving scarce water and soil resources. He suggested that the presently ignored areas were very important aspects for further study, using information based on an intensive study conducted by Pantnagar University in the Naurar catchment of the Ramganga river in Almora district.

Since several species of fish inhabit the rivers and lakes of the Himalayas and, considering the importance of research work on the fishes of this region, a few projects were proposed by Dr. S.S. Khanna, a pisciculturist from Pithoragarh, in his contribution on fishes. These included studies on the histomorphology, physiology and biology of a few species. Studies on reproduction and breeding habits should also be conducted.

Dr. D.D. Pant of Allahabad University felt that this region is full of interest for phytogeographical studies of the Himalayas. Moreover, the area abounds in deep and precipitous valleys in a mountainous region offering climates ranging from the tropical to the arctic and from the most humid to desert conditions. Naturally the flora of this region is unusually diverse. The Himalayan flora should be subject of multi-disciplinary research and such floristic studies should not be confined to the angiosperms but they must extend to all groups of plants. Further, these studies should deal not only with the distribution, ecology, geobotany, anatomy, taxonomy, chemo-taxonomy and cyto-taxonomy of the plants of this region but also with the experimental aspects of these subjects. With this end in view a first class botanical garden mainly of temperate and

alpine plants should be started in this region and it should also have an attached laboratory and a herbarium. For the sake of efficient working the garden and laboratories must be those of a Botany Department of a University rather than be under the control of the Government.

MINERAL WEALTH

In his original paper on the Mineral Wealth of Kumaon, Dr. K. S. Wadia of the Wadia Institute of Himalayan Geology, Delhi, brought out a point which I have often unsuccessfully tried to put across to our planners, that "the water flowing through the myriad rivers of Kumaon constitutes a valuable natural resource. Instead of gigantic multipurpose projects Kumaon should embark on a large number of smaller projects for generating power. These smaller power-plants can be profitably linked with the provincial grid. Besides other advantages, this will not involve uprooting of large populations from the fertile valleys."

Shri S.P. Singh, a botanist, pleaded for the establishment of a School of Himalayan Ecology, though not always with cogent or precise arguments. He prefaced the need thus; "Primitive man, at least when his numbers were small, lived in the ecosystem without essentially destroying it. His eventual use of fire and the beginning of agriculture introduced far-reaching 'trigger factors' into natural ecosystems and the beginning of purposefully modified systems. In this country we have already destroyed much of our natural ecosystems, aimlessly and recklessly."

In a paper curiously entitled "High altitude animals for Defence uses", Dr. S.M. Das of Lucknow, said that animal protein food in the Himalayas, which can be utilised by our defence forces in the event of emergency and the failure of regular food supply, included the high mountain goats, sheep and antelopes. As these animals are becoming rarer, they can be supplemented by others, such as snow-hares, pikas, marmots, voles, shrews, and Himalayan bats. Himalayan birds and fishes obtained from the streams can also provide rich food. In the absence of the above animals, Himalayan lizards and snakes can be used. The author described methods by which these reptiles can be used safely as food.

The author outlined ecological research studies before a complete plan can be laid out for reference purposes. These included:

- a) Study of highland vertebrate fauna including rare animals and fishes.
- b) Study of natural populations of animals in the Kumaon-Garhwal region.

- c) Study of altitudinal migrations in summer and winter.
- d) Ecological adaptations of food and habitat.
- e) Study of natural enemies of these animals.
- f) Search of high-altitude small emergency-protein-food animals.

Though Dr. S.M. Das seemed strangely unaware that much of the research he wanted done had already been published in India and abroad, a shortcoming in the papers of many scientists, I found, he did make some interesting new revelations about snakes and lizards !

I wonder how the other scientists, and the organisers, who were clearly interested, (and said so!) that Kumaon University should be started and should be located in Naini Tal, felt about the rational and objective views of Dr. M. Yunus on the criteria for the location of a Himalayan University or any other 'Educational Conurbation'. I, myself, found his views most clear and logical, as he suggested that "the problem of the location of an 'educational conurbation'—a university, should be tackled on lines—non-sentimental, non-personal and non-political in the ultimate interest of education and the students."

Mr. R.K. Baslas pointed out in a paper on Essential Oils that the cost of essential oils and aromatic chemicals required for our industries imported from abroad is very high. Our country is faced with acute shortage of foreign exchange and we should explore ways to develop the essential oil industry so that greater variety and quantities of essential oils may be exported. The essential oil industry could well utilise Himalayan species like Cymbopogon, Geranium, Cassiopa and many temperate Himalayan species of sedges, heather and gorse, though Dr. R.K. Baslas strangely failed to mention the long list of the ones already in use.

In a compositely authored paper, Messrs Dave, Masood, Mehrotra and Verma, pointed out the vast potential of the Himalayan limestone deposits since most of the Himalayan states are endowed with rich deposits of limestones, which occur in widely varying physical forms and chemical purities.

Limestone is one of the most important raw materials for various industries. Being the cheapest source of alkali, there is hardly any chemical process in which limestone or its derivative lime does not find application at some stage or the other. It is therefore evident that the limestones in the Himalayan regions can parent many an industry.

Lime produced from the limestones is one of the earliest known building materials and still is one of the cheapest. Research work carried

out in the laboratories of the Central Building Research Institute, Roorkee, has re-established it as an inexpensive binding material in lime mortar, instead of cement.

C.R. Bhatt of Naini Tal advocated "Mushrooms for the economic development of the Himalayas, as most hill men are deserting the Himalayas because of the uneconomical farming, and unemployment. To put an end to this and for economic development in the hills, we must search out some means to supplement the meagre incomes, like mushroom-culture and mineral development.

He explained that 'mushrooms' are the higher-fruited fungi, which are found in abundance in the Himalayas during the rainy season, and many of the edible wild mushrooms are sold in the local market, with local names as Guchhi, Chyeun, Kumbi, Dingri etc. Countries like U.S.A., Canada, Taiwan, Netherlands, Japan have developed the mushroom industry most intensively on commercial lines. Mushroom culture in India is also gaining momentum. The temperate climate of Himalayas is very suitable for the cultivation of mushrooms, which require an optimum temp. of 20°C to 25°C. For small-scale farmers, he had the encouraging information that "The market for mushrooms is readily available in India and abroad also. Mushrooms can be either dried or canned for storage and transport. Usually mushrooms are consumed fresh. Oriental mushrooms have a good market in the Far East, while buttons are in demand in Europe".

Mushrooms are rich in proteins and contain nearly all the vitamins. This is a delicacy and aid to digestion and cures blood pressure, heart diseases, cancer and is good for teeth and bones.

There are some wild, edible mushrooms in the Himalayas, which can be tried for cultivation, and with these we can introduce new indigenous mushrooms to the list of cultivated mushrooms.

In a complementary effort to Dr. Ghildyal's paper, Dr. S.L. Sah also of Pantnagar, read a paper on Rural Area Planning Research and Action Project of the G.B. Pant University in the Naurar catchment of Bhikiasen Block of Almora district of U.P. He explained that "The G.B. Pant University, Pantnagar has undertaken a rural area planning project in the Naurar catchment which is a mini-catchment of the Ramganga catchment in U.P. The objective of this project is to identify and solve the problems of rural development in the hilly regions and to find the methodology of development. It envisages an inter-disciplinary approach as well as active

co-ordination with several other development agencies functioning in the region. The aim is to devise ways and means for the optimum utilisation of natural resources like land, water, forests, livestock and minerals as well as human resources, and to find the constraints and strategic points to stimulate the process of development.

The area of investigation comprises about 100 villages and had a population of 37,779 persons according to the census of 1971. The density per square mile was 21.8. Out of the total area of 17,181 hectares, 55.35% was under agriculture, 4.57% under forest, 22% as barren areas, 8.04% as cultural waste land, 6.36% as permanent pastures and grazing lands and 2.5% as orchards."

Under this multi-disciplinary projects, the soil scientists have developed a land use capability classification of the catchment and the agronomists and horticulturists a crop development plan. These plans would then be evaluated by the economists and sociologists and then discussed with the people so that an economically viable and socially acceptable and feasible plan is prepared. The plan would include appropriate soil and water conservation plans for implementation and projects for developing infrastructure as well as drinking water, electricity etc. Some of the programmes under way include agricultural engineering activities; horticultural activities, agronomic trials and demonstrations; soil conservation, land capability classification, fertilizers and manures etc.; and animal nutrition and pasture development.

TOURISM PROMOTION

Dr. Tej Vir Sing of Lucknow, on the basis of an interesting Ph.D. thesis on "Tourism" read a paper on "The Prospects of Tourism Promotion in the Himalayas". Though his views on Tourism courses at University Graduate or Diploma level may or may not find wider acceptance, his novel scientific approach to Himalayan tourism if he can couple it with the harmful impact on the temperate environment of large-scale tourism, and lace it with the research work already done in Europe and the U.S.A. & Japan and Africa, holds promise of useful guidelines for Tourism Promotion.

In the paper "A Spatial Analysis of Exploitation and Utilisation of Forest Resources of Kumaon", J. S. Chauhan of Nainital, warned that the highly evolved plant formations in the biome, forest, are facing the severest challenge to their survival due to the fast expanding population. Even the Himalayan ranges which offered protection to the forests due to inhospitable conditions for cultivation, are no longer immune to the devastation of

forests. Large-scale deforestation has also taken place in the tarai and bhabar zone. These conditions have led to ecological imbalance and the effects associated with it are already being felt.

Large altitudinal differences exceeding seven kilometres, create vertical ecozones—Tropical, Temperate and Alpine. These are characterised by varied tree-species, both conifers and broadleaved. Substantial quantity of timber and fuelwood is produced from the forests. Bamboos, ringals and grasses also occur in substantial quantity. Many important items such as Katha and Cutch, resin, medicinal herbs, honey and wax etc. are also obtained as other products.

Timber is used mainly as sleepers for railways, poles, pitprops for mines, poles in plantations for fencing and also as beams and lintels etc. in construction work. Industries such as paper, match, plywood, sports goods, furniture making, wood-carving, toy, making, drawing boards, pencils, scale, slates etc., are also dependent on timber. Recently increasing demand of shuttles and bobins in industry is also being met from these forests. Also a large amount of wood is utilised in the form of fuel and charcoal. Some of the other important products such as resin, Katha and Cutch and plants of medicinal value are also in great demand and the raw material for these are furnished by the forests, with increasing devastation to the vegetal cover, which must now be controlled for better conservation to enable long-term utilisation.

Dr. S. Pathak, a forester specialising in soil conservation, indicated the importance of soil and water conservation programmes in hill regions, and warned that in the adoption of a soil and water conservation way of life, by hill populations, lay the salvation of all hill regions. Practice of soil and water conservation methods would not only help local populations in their area-development, but also be of use to the valley and plains populations by mitigating periodic floods and misery. Also it would help prolong the life and usefulness of the river-valley projects, and thus improve the national economy. Modern concepts of soil and water conservation have been defined as treatment and use of any unit of land so as to improve it for optimum production according to its capability, and to sustain it at that optimum production level 'sine die'.

Dr. Pathak pointed out how, in the Kalagarh Dam case, a centrally sponsored soil-conservation scheme was launched in March 1962 in the Ramganga watershed. A sum of Rs. 211.50 lakhs had been spent in the twelve years ending March, 1974. The total area of Kalagarh reservoir watershed is 3076 sq. kms. and in order, for the scheme to be effective, most

of the conservation treatment of this watershed should have been completed by April this year when the reservoir started getting filled. With the silt load not having been reduced significantly, silt will also get deposited along with water filling the reservoir, at the dreaded rate of 0.19 hm per sq. km. of 3076 sq. kms. of its catchment.

One very interesting, if inevitably specialised, paper was Dr. S. P. Joshi's on the Possibilities of Mutton Projects in Almora district. He pointed out that, "As cattle-rearing (goat, sheep rearing) in Almora and adjoining districts, viz, Pithoragarh and Chamoli, may be developed as a major occupation, the possibility of establishing units for tinned mutton also exist. The industrialization of the mutton industry will facilitate the development of other small-scale units which can be opened for tanning of leather, for production of soap and cosmetics, fertilizers and medicines (liver-extract, insulin etc).

While Dr. K. J. Mahale, Dean of the School of Languages of Jawaharlal Nehru University of Delhi, could not come personally, the suggestions in his paper for collaborative studies of Himalayan languages were timely, as there is hardly any work being done on the remarkable storehouse of language and dialect that are in the various areas and sub regions of the Himalayan states and nations.

Similarly, Dr. Girija Kumar could not attend the seminar but as Librarian of JNU, he has compiled what must be the most exciting of bibliographies, a survey of the literature on the Himalayan region. In his own words, "this paper reviews the literature published in India and abroad relating to the Himalayan region after India became independent in 1947, in the context of the literature on the region published before 1947."

The most outstanding contribution has been made by civil servants and other administrators of the Raj. This tradition has unfortunately not been duplicated by Indian officials posted to this area. The number of publications to their credit can be counted on the tips of the fingers. Some interest is now being shown by Indian and foreign scholars. This includes a number of doctoral dissertations submitted to the Indian universities. There is more emphasis on sociological studies rather than travel and description in this type of literature. The social scientists have, thus, taken over where the administrators have let off.

There has been a flood of literature on the Sino-Indian war of 1962 due to the intense political interest in the dispute in India and abroad.

Most of the literature is, however, of polemical nature and hardly provides additional information on the area.

The paucity of literature on the region as a whole and individual areas is appalling. There is not a worthwhile study, for instance, brought out on Kinnaur, in spite of the fact that this particular area is of great strategic importance to the country. There is only one area, namely Nepal, that has been covered adequately in recent years. The neighbouring areas like Sikkim and Bhutan did not have an equal treatment.

What is necessary is to map out the whole Himalayan region extending from Ladakh to the frontiers of Burma. Monographs, reference works and bibliographies should be prepared on a systematic basis as a result of co-operation between several institutions in India and abroad. Gazetteers, for instance, are one of the most important reference works to be undertaken for each area in the region.

The important basis for such an enterprise will be missing so long as detailed bibliographies containing books, periodical literature and Government reports are not prepared. Some work has been done on individual areas as Nepal. What, however, needs to be done immediately is that a comprehensive bibliographical project on Himalayan region as a whole is taken up during the next decade.

ANCIENT CULTURES

Dr. M.P. Joshi of Pithoragarh pointed out, "Interestingly along the foothills of this region, wherefrom starts the vast stretch of the plains, traces of ancient cultures have been found at different places, notably Ruar (Ambala distt.), Bahadarabad (Saharanpur distt.), Rajpur Parsu (Bijnor distt.), Hastinapur and Alamgirpur (Meerut distt.) Ahichchhatra (Bareilly distt.) and Kasipur and Ramnagar (Nainital distt.). The excavations in these places have revealed traces of successive settlements some of which go as far back as those of the Harappan, Copper-hoard, Painted grey-ware and Northern-black-polished-ware cultures.

It appears that impressed with the grandeur of the glittering Himalayan snowy summits with peaceful, inspiring and attracting domains and having within plentiful sources of perennial rivers some of the people of the above mentioned cultures advanced at one time or the other towards them in the hope of finding the possibility of a permanent settlement. Literary and archaeological sources coupled with local traditions also reveal that the natural formidable barriers of thick belt of forests and the intricate system of mountain folds have always attracted as an ideal refuge

the politically weaker sections of the plains who were driven away by the stronger ones.

Though the Archaeological Survey representative did not agree with these views, Dr. M.C. Bhatt of Garhwal said that a historical survey and a museum for rare finds was needed. He also noted that the Central Himalayas, stretching from the Jumna to the Kali rivers, cover the two divisions of Kumaon and Garhwal. This area has attracted saints and seekers of knowledge from the dawn of civilization. Trade and travel have been other attractions. The impassable mountain walls made this region immune from Muslim invasion and also a refuge for the fugitives from the plains.

It is, therefore, natural that historical material coins, epigraphs, monuments, manuscripts etc. should be available here in relatively large quantity. In this region 80 per cent of villages possess copper plates recording land grants made by earlier kings. They also possess 'Vamsavalis' written on birchbark or paper. Old temples and maths have a good many MSS. History is preserved in folk lore in the shape of 'Gager', 'pawade', 'Katku', 'Bhadau' etc. relating to old royal families. One of the important sources of history is the traditional lore of such tribes of the Himalayas as Huniya, Babri, Jaunsari, Naga, Khasiya, Banraut and Bhotiya.

Pushpesh K. Pant, of Jawaharlal Nehru University, read a fresh paper on the growth and change in Almora town, against the traditional place I have known for 30 years.

In his paper "Almora 1919-1939 : twenty years in the life of a small town in the hills", he says that small towns, 'Kashas', have played an important role in the history of human civilization which has seldom been recognised. 'The City' (metropolis) as the heart of a cultural system, be it Pataliputra or Rome; London or Peking, has received the lavish attention of historians. This paper postulates that the small towns play a crucial role in the communication network which links the masses, the grassroots with the centres of political command, cultural control and in the process 'filters' the message, often changing it qualitatively.

In the hills, where economic resources are scarce or have not been easily accessible, existing towns achieve a far greater importance. At times for large masses in the rural hinterland they assume aspects of the city.

Then again, not all hill towns are alike. Some were founded by the British as hill resorts e.g. Nainital, others have had a chequered history

spanning centuries rich with tradition, e.g. Almora. Towns of the same category show significant differences in ethos. A comparative survey should provide some insight into intra regional variation in local conditions for foundation/evolution of a township.

Against this historical background, an attempt was made to depict the process of social change in Almora during 1919-1939. Some of the indices of changes examined and analysed are :

1. Transport and communication
2. Spread of education
3. Political awareness
4. Participation in community life
5. Changes in social stratification
6. Public services like health etc.
7. Cultural life—articulation of attitudes, etc.

No attempts has been made to draw explanatory conclusions at this stage. Only various linkages are suggested and lines are drawn tentatively to pursue a more rigorous study in future. This self-indulgent, somewhat romantic exercise, might interest some other participants as it cuts across the borderlines of different disciplines—History, Geography, Economics, Sociology and Political Science.

PEOPLE'S ASPIRATIONS

Dr. A.C. Sinha of Jawaharlal Nehru University, in his paper "The Indian Himalayan policy and the Himalayan peoples" said "The Himalaya has always aroused a sense of awe in the Indian mind. Though it had always been an object of reverence, it had not been an area to be explored conquered and ruled. It was the British who evolved a strategy for the colonial expansion and imperial defence against the increasing influence of the European powers such as the Russian, the French, and the Germans in Central Asia. The British colonial interests were safeguarded by maintaining the status-quo throughout the Himalayas from the North-West Frontiers to the North-East Frontiers. That's how certain buffer States were carved out and autonomy was granted to all and sundry ethnic entities. They deliberately maintained the gap between the hill people and the plainsmen by refusing to reorient the power structure, subsistence economy and tribal ethos. It was expected from the Central Government of Free India to evolve a policy of mass participation, political develop-

ment, economic growth and psycho-cultural integration of these people with that of the Indian mainstream.

His paper attempted a historical survey of the Indian Himalayan policy vis-a-vis the Himalayan peoples. It delineated elaborately the British schools of a limited area influence and the forward policy in the Himalayas. And, lastly, it made an attempt to show how we have failed to discontinue the British legacy in the Himalayan Policy and whatever decisions we are forced to take, they are taken on an ad-hoc basis. If at all we have our Himalayan policy, it may be termed as the policy of the floating convenience."

Dr. Dharendra Sharma, Director of the Institute of Socio-Political Dynamics and currently with Jawaharlal Nehru University, and one of the organisers of the seminar, in his paper on Socio-Political Dynamics of the Trans-Himalayan Peoples, explained that with the advent of revolutionary developments in Tibet it was but natural that socio-economic equilibrium of the Trans-Himalayan region and its immediate neighbourhood from Ladakh in the western sector to the border areas of Nepal, Sikkim and Bhutan, in the eastern and middle sectors, should be disturbed. It had upset traditional norms and process of slow-moving economic and cultural cybernetics to the extent that it shall never be the same again. But in view of the revolutionary changes across the border, India's border areas are pregnant with a great many socio-political upheavals.

Thus, the first Himalayan studies seminar which many of us approached with great hope and greater expectation served less the purpose of imparting original information or fresh field research data or innovations, than the purpose of bringing together so-called experts interested in the field, but lacking the intellectual grasp facilities, the expertise and the field-research programmes needed for a thorough study of the Himalayan region.

The soil and water studies, and the conservation programmes and the forestry potential both current exploitation and utilization and the future problems and prospects, threw-up the most interesting material. Botanical and Zoological papers were uniformly mediocre but the development of fisheries and mineral resources again brought out interesting source material.

The seminarists for the most part turned out to be better equipped in regard to the more obviously utilitarian aspects of the Himalayan region, which are currently also the subject of Governmental departmental, political and research and development plans and programmes. Thus, the

industrial possibilities, the requirements of technological development, particularly for rural industrialization, development of resources like lime-stone and magnesite, as well as small-scale and cottage industries and horticultural possibilities, were better covered than actual field work or ecological or environmental issues.

The studies of political institutions, history, culture and folk tradition and archaeology, though the most enlightening and occasionally original, showed the state of Himalayan regional knowledge, a state of backwardness which it was the intention of the seminar to highlight and eventually to help to overcome. Though some papers like those of Dr. Sinha on Indian Himalayan Policy and Dr. Dharendra Sharma on the Socio-political Dynamics of the Himalayan peoples were outstanding, they can be of only limited or local or cultural significance as yet, since the strategic significance of the Himalayan region has already been keenly studied and rationally appreciated by the defence authorities of the Himalayan nations like India and China.

What emerged most clearly, therefore, from the Himalayan studies seminars was the continuing lack of first hand information, comprehensive documentation and the inadequacy and low calibre of field research programmes and personnel.

What emerged equally clearly, however, was the urgent need for an Institute of Himalayan Studies which one of our premier universities in the country, fully backed by the University Grants Commission, should undertake on a well-organised and well-founded scale. It might even be considered a sufficiently urgent and important national issue to be made an autonomous institute under the direct control of a 'multi-university board.' What action finally results from these deliberations and the frequent efforts of the author to bring the problems to the notice of the country, remains to be seen.

ONE WORLD—THE PROBLEMS AND PROSPECTS OF WORLD FEDERATION

GROUP CAPTAIN VIR NARAIN

“THE better mind of the world desires today not absolutely independent States warring one against the other, but a federation of friendly interdependent States. The consummation of that event may be far off. I want to make no grand claims for my country. But I see nothing grand or impossible about our expressing our readiness for universal interdependence rather than independence.”

—MK GANDHI

INTRODUCTION

The history of man's progress has essentially been a record of the increasing circle of his allegiance. The first steps in this progress had been taken even before mankind was born, less than a hundred million years ago. The Primates—ancestors of *Homo sapiens*—lived in large communities in which already the basic unit was the family. Since that distant past, human society has moved progressively from family, through tribe and clan, to larger and larger groups which have considered themselves united by a common bond. These bonds have, at various times and among various peoples, been those of kinship, race, language, culture, religion, ideology or common history.

This outward movement of human institutions has by no means been a process of uninterrupted expansion. A dialectical process of coalescence and fragmentation has been inherent in this progress. Thus, the very things that have brought a group of men together have divided them the more sharply from the others. Human history is, for the most part, a gory tale of conflicts based on tribe, race, religion and ideology. Here, again, there is a pointer from our evolutionary history. The near-ancestors of our species—the Hominidae—were the only mammals given to killing and eating their own kind. Cannibalism has long since been given up; but the killing of our own kind is our main preoccupation even today.

The most potent factor which, in recent history, has united men everywhere and, at the same time, brought them into bitter conflict with others similarly united, has been the emergence of the Nation-State. The modern State system, now universally prevalent, is based on the cardinal principle of national sovereignty. There has been a growing body of opinion that, in the light of recent historical experience and in the context of the phenomenal growth in the destructiveness of weapons of war, the concept of sovereignty must give way to that of World Government. It is the aim of this essay to examine the problems and possibilities of bringing about a World Order in our times.

NATIONAL SOVEREIGNTY AND INTERNATIONAL LAW

"if sovereignty means absolute power, and if States are sovereign in that sense, they cannot at the same time be subject to law. If these premises are correct, there is no escape from the conclusion that international law is nothing but a delusion."

—JL BRIERLY

The two pillars on which the whole edifice of the modern State System rests are the concepts of national sovereignty and international law. A detailed examination of these concepts is, therefore, necessary for any study of the possibilities of an international order.

NATIONAL SOVEREIGNTY

The first systematic formulation of the doctrine of sovereignty dates back to 1576, when the French scholar, Jean Bodin published his *De Republica*. Bodin defined the State as "a multitude of families and the possessions that they have in common ruled by a supreme power and by reason". The central idea here was that of a supreme authority or *summa potestas*; an idea that was later expressed as sovereignty. The concept of sovereignty had immediate relevance to the conditions prevailing in 16th century France, and in many other countries of Europe. The Reformation had weakened the unity of Europe under Christianity. France herself was riven with feudal rivalries and religious intolerance. The idea of a supreme authority was calculated to bring stability and unity in this situation—and in this it succeeded admirably. Sovereignty, in Bodin's view, was an essential prerequisite for the maintenance of internal political order.

Though Bodin has been charged by some with having given rise to absolutism and the concept of unbridled and unlimited power for the

sovereign, it is unlikely that he intended the sovereign within a State to be other than a constitutional ruler subject to the fundamental law of the State. After Bodin, writers like Hobbes and Grotius further elaborated the theme of sovereignty. Hobbes considered sovereignty to be absolute and illimitable; "it appeareth plainly that the sovereign power...is as great as possible men can be imagined to make it." Grotius defined it as "that power whose acts are not subject to the control of another, so that they may be made void by the act of any other human will." Here, clearly, sovereignty is shown to flow from might rather than right, thus putting it outside and above the sphere of jurisprudence. Apologists for absolutism all over Europe seized upon this concept; and absolute monarchies like that of Louis XIV of France drew great strength from it.

With the rise of constitutionalism, the doctrine of sovereignty had to be modified. Locke and Rousseau propounded the doctrine of the sovereignty of the people. Although this concept helped a great deal in the liberalisation of government and the emergence of democratic processes, it was logically inconsistent with the basic premise of sovereignty that within a state supreme power must reside in one person.

What is of special interest to us, however, is the gradual distortion and extension of the concept of sovereignty as the fountainhead of power within a State to that of sovereignty as an attribute of States in their relations with each other. Thus the concept of sovereignty, originally devised as a principle of international anarchy. The incompatibility between absolute sovereignty and international law has been well put by Richard Law: "It is impossible to limit sovereignty, because if sovereignty is limited it ceases to exist. You cannot have qualified sovereignty. You can have sovereignty which is absolute power; or you can have something less than absolute power, which is not sovereignty. But a limited sovereignty is a contradiction in terms." Lord Lothian has expressed a similar view: "The root of anarchy (is) national sovereignty...sovereignty implies that the only instrument which nations in the last resort can use to bring pressure on other sovereign nations is the violence of power politics or war..... sovereignty leads inevitably to economic nationalism...It is a denial of the brotherhood of man and of the principle that there ought to be one law or sovereignty, based on moral principle, uniting and governing the whole earth."

It can be seen that one assumption common to all these formulations of the nature of national sovereignty is its absolute character. There are no degrees of sovereignty; there is either complete and unlimited sovereignty or none at all. In the technical and juridical sense this view is

perhaps unexceptionable. We shall, however, examine later whether the realities of the contemporary international situation do not in practice dictate a less absolutist view of national sovereignty.

INTERNATIONAL LAW

International law has been defined by Brierly as "the sum of the rights that a State may claim for itself and its nationals from other states and of the duties and consequences it must observe towards them."

As a distinct branch of legal science, international law had its beginnings in sixteenth-century Europe. The existence of law presupposes the existence of a society within which it operates just as the existence of a society presupposes the existence of a law regulating the relations between its members. The kindred nations of Western Europe—with a common cultural and religious background—constituted such a society. The weakening of the power of the Church after the Reformation brought in its wake the emergence of several powerful, independent and sovereign nation in Europe. The sovereignty of these states, and the consequent conflicts and rivalries, made the establishment of an international law as imperative as it made its operation difficult.

Despite many attempts to resolve it, this inherent conflict between international law and national sovereignty remains the central problem of international relations even today. Obligation is the basis of all law; and no satisfactory rationale for the basis of obligation in modern international law seems to have been devised so far. The two main rival doctrines—the doctrine of 'fundamental rights' and the doctrine of positivism—both suffer from inherent contradictions and weaknesses. Despite its obvious limitations and weaknesses, international law is certainly a force which has contributed greatly to the regulation of the relations between nations. In practice the doctrine of sovereignty has not had the crippling effect on international law that a purely theoretical examination of the problem would suggest. It does, nevertheless, remain the major obstacle in the way of the integration of the world community. As an American Commission which examined the question of organising for peace after the last war observed: "A sovereign State, at the present time, claims the power to judge its own controversies, to enforce its own conception of its rights, to increase its armaments without limit, to treat its own nationals as it sees fit, and to regulate its economic life without regard to the effect of such regulations upon its neighbours. These attributes of sovereignty must be limited."

Apart from the limitations imposed on it by the concept of national sovereignty, international law at present suffers from other weaknesses also. It has no legislature to keep the law abreast of the needs of the international society; it has no force or executive power to enforce the law; its administrative machinery is not adequate for the mass of business that has to be transacted. Another weakness, more important than these, stems from the fact that there is not yet, in the international community the degree of spiritual cohesion that is necessary to make international law strong and respected. If international law had the same influence over the international community that their respective national laws have within the state, effective sanctions in the enforcement of international law would readily follow. The growing interdependence of nations has lately led to a considerable increase in the number of international institutions. This growth has, to a great extent, fostered the sense of cohesion and cooperation necessary for a common respect for the law. It must, at the same time, be admitted that international law, as customary law, is inadequate to meet the requirements of the international community. If international law is to be developed to measure up to the sophistication and complexity of the modern international community, the establishment of an international legislature cannot long be avoided.

THE NEED FOR A WORLD ORDER

"The look for a continuation of harmony between a number of independent unconnected sovereignties, situated in the same neighbourhood, would be to disregard the uniform course of human events, and to set at defiance the accumulated experience of ages."

—ALEXANDER HAMILTON

We have briefly examined an outline of the elements of the modern state system. It is only against the background of the contemporary international system that any realistic appraisal of the means, methods and necessity of integrating the world community can be made.

The three main aspects of the contemporary international situation which seem to make the establishment of a world order imperative are : first, the immense destructive-in fact annihilative—potential of modern weapons of war ; secondly, the rapid and far-reaching advances in communications and transportation and thirdly, the great increase in the number of independent sovereign states since the end of World War II.

WEAPONS OF ANNIHILATION

Until the end of the nineteenth century war could, with some justice, be regarded as politics continued by other means'. In our times, two

major holocausts and several minor, but no less sanguinary, conflicts have proved that no rational or comprehensible ends of policy can be served by a modern war. Victor and vanquished alike can reap nothing but disaster from warfare. It is estimated that the number of all the dead of all wars between 1790 and 1914 was about 4,500,000. In World War I, the direct battle deaths alone accounted for 8,600,000 lives in four years. World War II accounted for 15,000,000 battle deaths among the Great Powers alone; the total military and civilian dead being estimated at about 22,000,000. This was the price of war before the development of nuclear weapons. With the development of nuclear weapons, and their associated philosophies of 'balance of terror' and 'deterrence', the scale of mutual destruction in a war defies the imagination.

That the weapons of mass destruction have made nonsense of war as an extension of policy need not, however, lead to the conclusion that warfare is unlikely to be resorted to in future. War is both the cause as well as the cosequence of the rivalries for power between independent sovereignties. We may not agree with Schuman's view that "War is a habit that men enjoy, as they enjoy gluttony, fornication, gambling and crime." Nevertheless, history as well as current international experience, bears out the thesis that, as long as the world contains, independent of any law, sovereignties with overlapping and competing interests, warfare cannot be ruled out.

COMMUNICATIONS AND TRANSPORTATION

The phenomenal success of the technology of communications and transportation has far-reaching sociological and political consequences for the world community. Aristotle had suggested that the maximum size of an organised community should be determined by the limits within which men can hear the voice of a single herald. Global radio and television communications are already a technical reality. Thus, even Aristotle's ancient criterion would dictate the establishment of a community organised on a global scale. It cannot be denied that the development of radio and aviation has made it quite possible to administer a single system of law throughout the world.

Outside the sphere of politics, the tremendous growth of commerce on a global scale that has followed in the wake of the revolution in communications and transportation, has contributed to the emergence of an immense and closely-knit world community. The ease and rapidity with which goods, people, ideas, information weapons and infectious diseases can travel around the globe cannot be matched by the ease of

communication and travel a century ago even within a relatively small nation. Despite the division of the world in independent political sovereignties; and despite differences of race, culture and wealth, a world-wide community does exist. As we have seen, the existence of a community presupposes the existence of a law which governs the relations between its members. The great numbers of international institutions which exist for the purpose of governing these relations, albeit in specialised spheres, bear testimony to the real existence and viability of the international community.

Law, in its non-technical usage, is a system of rules administered by specialised social institutions, whether backed by force or not. Under this definition, it would not be incorrect to assert that there is already in existence a polycentric world-community operating under the rule of law. This community is not a sovereign state, nor is any sovereign state a part of it.

THE PROLIFERATION OF SOVEREIGN STATES

The end of World War II was followed by the dissolution of colonial rule in many parts of the world. Consequently, there was a tremendous increase in the number of independent sovereign States. Inevitably, these States represented an extremely wide variety of political, cultural, economic and military levels. The implications of this large number, and bewildering variety, of sovereign States for the conduct of international affairs are clear. Only by establishing highly efficient world-wide institutions would it be possible to achieve an orderly and fruitful relationship between the different states of the world. The United Nations Organisation, supported by its various specialised organs, has been able, in no small measure, to contribute to this end—particularly in the non-political field. In the political field, the situation is not very different from the one described by Hobbes nearly three hundred years ago: "In all times, kings, and persons of sovereign authority, because of their independence, are in continuous jealousies, and in the state and posture of gladiators; having their weapons pointing, and their eyes fixed on one another; that is, their forts, garrisons and guns upon the frontiers of their kingdoms; and continual spies upon their neighbours; which is a posture of war. The notions of right and wrong, justice and injustice, have there no place. Where there is no common power, there is no law: where no law, no injustice."

The United Nations Organisation is, at present, far from being the 'common power' needed to establish the rule of law in international affairs.

INTERNATIONAL FEDERALISM

World Government can be achieved in two different ways. It can be achieved by conquest; a method that goes back to the Roman Imperium, to Alexander, Jenghis Khan and Napoleon. The Communist dream of a global imperium—a Pax Sovietica—is still alive. The second method is that of a world federation.

Of the first method—that of unity under an empire—history has several examples: though none attained a truly global scale, “96 AD to 180 AD” says Crane Brinton, “mark the nearest to ‘One World’ at peace we Westerners have ever realised here on this earth”. There are important lessons to be learnt from the Pax Romana; and from the empires of Alexander and Jenghis Khan. We shall not dwell on these here in any detail, beyond asserting the rather self-evident truth that a World Order based on conquest could never serve the ends of peace, liberty, equality, or any of the other great ideals that mankind aspires to in our age. As Toynbee has observed, “sword-blades are foundations that never settle.”

If we rule out the attainment of World Government through conquest, the choice that is left to us is a voluntary union, or federation, of the various independent sovereign states. The idea of federalism as a device for uniting divergent political entities for certain specified, shared and common purposes can be found in the writings of great political philosophers like Althusius, Grotius, Rousseau, Kant and de Tocqueville. It was, however, during the Philadelphia Convention, when the American Constitution was being evolved, that federalism in its modern form was developed.

Friedrich has defined a federation thus: “A federation is a union of group selves, united by one or more common objectives but retaining their distinct group being for other purposes.” He goes on to say, “Federation is, on the intergroup level, what association is on the interpersonal level. It unites without destroying the selves that are uniting and is meant to strengthen them in their mutual relations. It organises cooperation.”

The theme of the federal process could well be expressed by the phrase ‘unity in diversity’. As against domination from without, as in the case of an empire, a federation derives its power from within, from the consensual will of its constituents. This process of uniting for certain specified common purposes, while retaining one’s identity and freedom of action in other spheres, can operate at all levels—from the municipal to

the international. The federal concept has played a very important part in the building of nation-states.

From the devising of a federal constitution to form a State, to the framing of a constitution to include all, or a large part, of the nation-States comprising the modern State system, there is no radical change except, perhaps, in degree. For the organisation, coordination, division as well as restraint of power, whether between the diverse elements within a state or between the states themselves, the federal process has been found to be more successful than any other device.

GROWTH AND STRUCTURE OF FEDERATION

Between a diversity of distinct and unrelated groups and the formation of a federal unity there lie stages of institutional evolution. Generally, the first step towards the growth of an inclusive community, which brings together formerly separate communities, is the formation of a league or some other inter-governmental association. This may later mature into a confederation and, finally, into a federation.

The characteristic structure of a league, which is generally carried over into the structure of the federation, comprises three distinct organs: an assembly of the representatives; an executive body established to implement the decisions of the assembly; and a judicial body to resolve any points of differences. The League of Nations and the United Nations, as also many other leagues and confederations, were based on this pattern. This pattern, it will be seen, conforms to the basic structure of any organised state. There is a deliberative body, an executive to give effect to its decisions, and a judicial body to resolve matters of dispute. As within a State, the resolution of differences by recourse to arms is rendered redundant. Also, just as, among the concerns of a state, defence occupies a primary place; joint defence is generally the prime objective of most leagues. In a close federation, there would be a variety of matters where the component elements would follow common policies; and the federal constitution would define clearly what the common as well as separate spheres of action are. The federal constitutions of the USA, USSR, Brazil, Mexico, Canada, Australia, India, all have such provisions.

GENERAL OUTLINE OF INTERNATIONAL FEDERATION

The main problem in any federation is the division of powers between the Central federal authority and the component States. It is one of the chief merits of federalism that its essential form can be adapted to suit a great diversity of circumstances. The distribution of powers between the

central body and the federating States would depend entirely on the number, nature and individual characters of the States. We may reasonably assume that the unification of the entire world under one federation is a distant ideal. Much more likely, and practicable, is the formation of large regional federations which, in turn, may eventually prove to be the building-blocks of a world order. It is possible, with this limitation in view, to suggest a bare outline of what minimum powers and responsibility must vest in the central authority. These will be the powers necessary for the Federal Union to take shape as a powerful and permanent state. As we have seen earlier, the first of these powers will be jurisdiction on matters of common defence. Another obvious power will be the control of foreign relations; in a World Government this would become interstate relations. In addition, control over the finances related to defence and foreign affairs would also need to vest in the federal authority.

The powers indicated above are the minimum that must reside with the Federal Union—even in the loosest federal structure. In addition, matters of common interest, such as currency, customs communications and transport, would in all likelihood be transferred, to the central authority. In other matters, not so transferred, such as education, religion, labour legislation, social welfare etc., the federating states would have complete freedom of action. The Indian Constitution is a good example of such a distribution of powers.

PROBLEMS AND LIMITATIONS OF INTERNATIONAL FEDERATION

The framing of World Constitutions has been attempted on a large scale by political scientists and idealists alike. No such attempt is intended here. However, if any facile optimism in relation to this difficult enterprise is to be avoided, mention must be made of the chief problems that must be solved before any large-scale federation can be attempted.

First, it needs to be emphasised that federalism cannot be usefully employed to resolve a difficult international conflict situation. Once established, federalism helps to avoid conflict and violence between its component states; but where such a conflict situation already exists, it would be almost impossible to establish, or maintain, a federation. In a sense, therefore, federalism is a preventive, and not a remedy.

The first obstacle, therefore, in the way of a World Federation would be the bi-polar alignment of the world State system. This dualism between the two super-powers, the USA and the USSR, makes the establishment of a World Federation highly improbable. The emergence of China as a

third, and least internationally responsible, power adds to the difficulty of the situation.

The second problem which any successful federal constitution must solve is the equality of the component States. The Federal Assembly—or, taking the terminology of the UN, the General Assembly—would probably have to be based on an equal representation of all member States. The actual differences between the powers of the various states would then be allowed for by the greater influence of the stronger members in the executive establishment. This itself, particularly in the bi-polar and antagonistic division that prevails today, would be a matter of the utmost difficulty. Apart from the question of real power, there is the question of sheer weight of numbers. The most populous states also happen to be the ones with low military and economic power. Added to this would be the problem of miniscule States. The UN has had to encounter all these problems; and has had only indifferent success in solving them.

The fourth problem, inherent in a federal organisation is that of the admission of new members and the secession of existing members. The problem of secession, particularly, has not yet found a satisfactory practical or theoretical solution. The Civil War in the US in Nigeria, and the Sonderbund War in Switzerland are examples of the explosive possibilities of this problem.

The fifth problem, which is of crucial importance for the practical functioning of any federal organisation, is that of the establishment of a workable joint executive. This has a direct bearing on the viability of any newly-established international organisation. The Council of Europe is believed to have remained ineffective primarily owing to the absence of such an executive. The workability of the joint executive is, in fact an acid test of the degree of real cohesion obtaining within an inclusive community. The success of the European Common Market is largely due to the existence of an efficient joint bureaucratic machinery.

The problems arising out of the enforcement of international law, and out of the concept of national sovereignty have already been examined in detail. From these would arise related problems of a Federal Armed Force, the question of citizenship as well as the position of the individual in relation to international law.

The catalogue of problems and difficulties given above is by no means exhaustive. A whole host of problems—constitutional, practical, organisational, moral, sociological and psychological—are bound to arise

in an undertaking so radical, complex and far-reaching as the establishment of a World Government. The intention, here, was to highlight some of the salient practical and organisational problems that might arise in any process of large-scale federation.

WORLD CITIZENSHIP

We have, so far, examined the question of international integration mainly from a formalistic, legalistic point of view. Such a consideration of this problem, unless it is supplemented by a more general and practical appraisal also, can be somewhat one-sided. For a realistic social and political description of the international scene, a purely formalistic and juridical account would not be sufficient. The answers to many important questions regarding the world community will have to be empirical. Does a world community in fact exist? Is it a highly interdependent, polycentric community? If it is, does it not follow that national sovereignty is, in fact, non-existent? If absolute sovereignty—and it is nothing if not absolute—does not exist, can there be such a thing as the 'exclusive citizenship' of a state? Or does every citizen owe allegiance, in addition to his own autonomous state, also to the polycentric international community of which he is a member? These questions are at least as important as logical abstractions regarding national sovereignty and international law.

There can be no doubt that there does exist a large, and rapidly growing, international community. The interdependence of nations is increasing in direct proportion to the growth of technology; and this, we know, has already reached phenomenal proportions. No nation is self-sufficient. No nation can afford to withdraw from the international system. Nor can any nation claim that its actions lie completely outside the influence of other nations. This growing interdependence in a world which advances in communications have turned into a neighbourhood, has considerably diluted the sovereignty of nations. And, as we have seen, to dilute sovereignty is to destroy it; unless, of course, we give the world a new meaning. In the American constitution, for instance, the federating states are referred to as sovereign states.

The main objection to the real existence of international law has been that the doctrine of sovereignty makes it a logical impossibility. We have seen that what is being termed as sovereignty is, at best, no more than domestic autonomy. International law does, already, exert a great deal of influence on the course of international affairs. No nation can afford to cease professing adherence to international law. Also, no nation tries to

justify its international actions on the basis of its sovereign independence: on the other hand it generally seeks to prove conformity with international law.

If there is a world community operating under an international law, it follows that every citizen of a State is also a citizen of the world. It is true that international law does not, at present, operate on individuals. States are persons in international law. Nevertheless, even though indirectly, the citizen of a State is also subject to international law. Gandhi once told Julian Huxley, "I learnt from my illiterate but wise mother that all rights to be deserved and preserved come from duty well done. Thus the very right to live accrues to us only when we do the duty of citizenship of the world."

The concept of world citizenship is by no means new. It goes back at least to Alexander. Plato regarded all non-Greeks as enemies by nature. Aristotle regarded them as slaves by nature. To Alexander, with his empire stretching from Egypt to the Punjab, this was no longer a sensible concept. He sought to strengthen the unity of his empire by promoting the idea of world citizenship. This idea did not dispense with the local loyalties of the world citizens. In Rome's far-flung empire also, the concept of dual citizenship was followed, and all the citizens of the countries under Rome were also Roman citizens.

Where an individual's allegiance is claimed by national as well as international law, questions of choosing between the two in the event of a contradiction between them could arise. The criterion for resolving this conflict has been very cogently put by Cohen : "The correct principle for deciding predicaments of divided social loyalty is this, that when more than a single legal system is binding on us we owe a supreme allegiance to the one which is most widely administered."

The real basis for any integration of the world community is in the ideas and attitudes of the individual persons who form this community. The ideal of world citizenship needs to be fostered among the peoples of the various nations as a prelude to any genuine international union.

CONCLUSION

"...if there be any logic in the cosmos and any order in the fortunes of mankind, then it is altogether likely that the era in which we find ourselves will terminate either in a breakdown of the Great Society and a new Dark Age, or in the building of a Global Polity within which most of humankind, by sharing a common destiny and accepting common duties of citizenship,

will arrive at some tolerable reality of justic and self-fulfilment.. We possess in abundance the skills of science, technology, and administration which make such an enterprise materially feasible. If we lack the spiritual and intellectual resources requisite to the enterprise, we may well lose the future”.

—FEDERICK L SCHUMAN

The problem of World Government is one of the most complex, far-reaching and challenging problems of our times. In the brief survey attempted here it has not been possible to go beyond the most general outline of the problems and consideration involved.

We have seen the factors which make the establishment of a World Government imperative. These are : the great efficacy of our weapons of annihilation and the phenomenal growth in the technology of communications and transportation. We have also seen the major factors which militate against any international integration. The concept of national sovereignty, and the present ideological split in the world, are the strongest of these factors. We have examined, too, the means which could be adopted to bring about the establishment of a World Government. Of these, we have rejected the way of world conquest as both impracticable and undesirable; leaving World Federation as the only means which could reasonably be adopted.

History, we know, does not proceed by quantum jumps; and it would be naïve to expect a world order (or disorder) based on a multiplicity of contending sovereign states suddenly to be transformed into a World Government. But a process of transition has, in fact, been at work in international relations. In the three centuries between the Peace of Westphalia (1648) and the establishment of the UNO (1946) nations have learnt to pursue together their common goals, in war as well as peace, whenever the pressure of necessity or self-interest has dictated it. The pressure of a necessity more urgent than any known to mankind so far—the need for the survival of the human species—is now behind the movement for a World Federation. The myth of sovereign independence and the cults of ideological intolerance continue to divide the world. Yet the fact that the UNO is still alive as a force in international politics, and the growing understanding between the super-powers, must be treated as proof of the basic unity of the international community.

That this basic unity will, in the long run, lead to a World Order can only be doubted by an extreme pessimist, or an ultranationalist. But time

may be running short, and the long run may well not be vouchsafed to humanity. The proposition that war will abolish civilization if civilization does not abolish war can only be verified experimentally. It would be sensible, however, not to put the matter to test. In the words of General Macarthur, "You cannot control war, you can only abolish it". To abolish war the establishment of a strong and enforceable international law is necessary—and this can be achieved only by the establishment of a World Federation.

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THE MAKING OF AIJAL

LIEUT COLONEL J SHAKESPEAR

AIJAL, or more correctly Aizawl, had always been a very favourite village site, but was unoccupied when, in the spring of 1890, Mr. Daly of the Assam Police, arrived there with 400 men of the Silchar Military Police battalion, to cooperate with a column of troops under Colonel Skinner, which was struggling down the valley of the Dalleswary river to punish Lianphunga for raiding the Chittagong Hill Tracts.

It was on Mr Daly's recommendation that Aijal was chosen as the site of the fortified post which Colonel Skinner had been ordered to construct before he left the country. The site, like all old village sites, was fairly clear of jungle, Lieut. Petrie of the Bengal Sappers and Miners, planned the post, which consisted of two stockades. These were composed, to a great extent, of teak which was common near the site. The stockades and the buildings within them were constructed by Mr. Daly's men.

The smaller stockade was on the knoll on which the offices and the Club now stand. In it were the quarters of the Officers and a small guard. The other stockade was on the next knoll to the northwards, on which now stand several masonry barracks. In this were the huts of the rest of the garrison, which numbered 200 men in all, of the Silchar Military Police, under the command of Lieutenant H. G. Cole of the 2nd Gurkhas.

At that time boats could not get higher up the Daleswary river than Changsil and here was established a post held by 100 men to guard the store houses. Changsil had long been a Bazar and there were good Lushai paths from it to Aijal and other villages also to Silchar. It was by this path that Mr. Daly's party came up in 1890 and it was along the line of this path that the first mule road was made by Mr. Sweet of the P.W.D. From Changsil the road ran more or less along the riverside to Sairang and thence to Aijal. The present Silchar road leading out from the northern end of Aijal was not made till shortly before I left the Hills. I had long meant to make it, but neither money nor labour was available earlier. The new road saved two marches and also avoided the unhealthy Dalleswary valley.

The river between Changsil and Sairang was made passable for boats by Mr. Davies and Captain Loch, who spent some time blasting away

boulders. Directly the river was cleared the traders from Changsil transferred their shops to Sairang. It was not till the cart road from Sairang was opened that the Aijal bazar become really important.

PEACE RESTORED

The rising which began in September 1890, with the murder of Mr. Brown, the first Political Officer, and attacks upon the Aijal and Changsil posts, was put down by Mr. McCabe, who had made his name by subduing the Nagas. He earned the name of "Lal-mautu", so many rebel monarchs did he capture. Peace was restored by the spring of 1891 and from that date the expansion of Aijal began.

The remainder of the Silchar Police battalion was transferred to Aijal and Capt. Loch, 3rd Gurkhas, arrived as Commandant. The rising of the spring of 1892 was also quelled by Mr. McCabe, but having restored order his health gave way and he had to take sick leave and was succeeded at Aijal by Mr. A.W. Davies, also from the Naga Hills, where he had succeeded McCabe.

Davies and Loch worked well together and Aijal made a good start under them. Of the details of the changes which took place between 1891 and spring of 1897, when I arrived in Aijal and took over charge from Mr. A. Porteous, who had succeeded Davies as Political Officer in 1294, I can tell nothing.

I found the Military Police in Aijal housed in good masonry barracks and the whole station a miracle of neatness, thanks to Loch, who though a good soldier, was by inclination an engineer and house builder. Having seen the roofs of two of his barracks blown clean off during a March storm he determined to put an end to such disasters by building a stone-house for himself and his men in place of wretched affairs of jungle timber and bamboo matting in which they were then living. He mentioned his intention to Davies who told him he did not think it worth-while forwarding such a scheme to Government for, he said, "We've been 10 years in Kohima and there's not one stonehouse there yet". "More shame to you" was Loch's reply and he set to work with his own men to build himself a house, at his own cost. When this had been achieved he asked permission to build barracks & c. for the garrison of Aijal. His house having been passed by the P.W.D. as 'good and fit for issue' Loch was told to submit an estimate for all the buildings he considered necessary and this being sanctioned he went ahead. He engaged a Khasi contractor, Sahon Roy, and also employed many of his own men.

ESTIMATES EXCEEDED

When I arrived early in 1897 he had built the Assistant Commandant's bungalow and all the Police barracks and hospital and was building the Quarterguard and office building. With the completion of that the works estimated for would be complete except for the Armourer's shop. Now Loch received a check. I told you that one estimate for all the buildings had been sanctioned. In framing that estimate, Loch had been guided by the cost of his own house, but as the work went on new quarries had to be opened in more remote and less easily worked localities and so the cost of each building rose above the estimate and this excess increased steadily but the fact was not discovered by the P.W.D. until the Quarterguard building was finished when it could no longer escape notice. The Quarterguard had, I believe, cost about double the estimated sum. The Chief Engineer rose in his wrath, and an order was issued that Loch should do no more building. This did not really much matter as the only police building remaining was the Armourer's shop, a small affair, and even that was up to plinth level when it was handed over to the Executive Engineer for completion. I had much pleasure in pointing out in my next annual report that though the building was a small one and was urgently required, the P.W.D. had not been able to complete it in a whole year and I suggested that Captain Loch might be given a contract to complete it, which was approved of and the shop was finished within a few months.

Before leaving the Police buildings, I better mention the Queen Victoria Memorial Porch added to the Quarterguard. The bust of her late Majesty was, I think, paid for by Loch. The two antique field pieces which flanked the porch have a curious history. They were part of the armament of a sloop-of-war, which was in the Chittagong river in 1857. When the detachment of the 34th Native Infantry stationed in Chittagong mutinied on 18th November, the guns were thrown overboard to prevent their falling into the hands of mutineers. Later these were fished out and fitted with wheeled carriages and eventually found their way to Rangamati, whence they were sent to Lungleh during the troublous time in 1892. It struck me that these aged guns, one of which from its date might have been fired at Waterloo, would form a suitable addition to the memorial of the Great Queen, so I had them brought over.

THE PARADE GROUND :

When Loch took over command the married quarters were on a spur which ran out from the main range, where the Parade ground now is. This spur ended in a knoll. The nearness of the ladies to the quarters of the gay bachelors, was a frequent source of trouble. Loch removed them to

their present abodes, and the devocotes were not so frequently disturbed. He then set to work to cut away the knoll throwing the spoil down on each side. When I arrived in 1897 the work was about half done, but a lump about 15 feet high still remained. At that time there was a road to the Post Office, along the east face of the ridge as well as along the west. Loch asked me if he might cut the eastern road away, and I, of course, agreed as its removal greatly increased the size of the Parade Ground. The cutting away of this road meant a lot of blasting. The labour for the Parade Ground was found by the Sepoys. Loch gave out contracts which were much sought after. To get the spoil away from the face of the hill to the edge of the ground the men worked in pairs, one wheeled the barrow, the other filled it. At the spot where the stuff had to be tipped, a Gurkha Officer stood with a bag of paisa, as each barrow load was chucked over the edge, the G.O. would throw one or more paisa, into the empty barrow, according to the length of the lead. The money for all this was provided by the Canteen Fund, which was largely produced by the sums which the workers paid to satisfy the thirst produced by their labours. The only cost to Government was Rs. 1,200/-.

The Range was also made by Sepoy labour. Mostly on Saturdays when every man from the Commandant to the last joined recruit put in about 8 hours kamjarri. Loch's battalion was the only one in which there was never any trouble about kam-jarni the reason being that there was very little except on Saturdays when every one worked. One day, Loch said to me, "I think I must be a very good man," I did not dispute it but asked why he had come to that conclusion and he replied "If you notice it very seldom rains on Saturdays, now there are about 800 men in barracks who pray for wet Saturdays and I alone pray for fine ones, and my prayer is generally granted—ergo I must be a good man". I agreed.

Now for the remainder of the station:—

THE SUPERINTENDENT'S HOUSE :

This was designed by my late wife. The first house was of the usual jungle timber type and stood at the south end of the present kawh. The house was just completed when I went home on leave, 1899. To keep the cost down I had put on a roof of bomboo shingles, which necessitated a plain roof with one slope, from ridge to eaves. This was not beautiful enough for Captain Cole who acted for me. He put in three gables which are a great improvement, but the roof leaked so vilely at the joints of the gables and the main roof that after my return I had to put in an application for a corrugated iron roof and was wiced for my extravagance. Cole also made the pleasant terrace along the front of the house and

handsome retaining wall and the picturesque flight of steps in the corner. The lawn and garden south of the house I made and I also made the lower vegetable garden to the north. The garden immediately to the north of the house was made by Porteous, who preceded me as Superintendent. He built the wall along the western edge, to keep off the wind. He, at very great expense, had three feed of leaf mould carried from the jungle and deposited in the garden. The orange trees I brought from the Chin Hills.

In my day the road from Aijal southwards, passed along close under the Superintendent's house and on the opposite side was the "Crater". This was the first effort made in the days of McCabe to solve the water supply question. He had a big excavation made in a circular knoll that stood opposite the house, the spoils being thrown outwards. Then he cut a number of shallow drains on the face of the hill below the Assistant Commandant's house all joining into one channel from which by a corrugated iron aqueduct he carried the drainage of that hill over the road into his "crater". The first burst of the rain filled the "crater" but the water leaked out all around and the Civil Surgeon whose house then stood on the north side of the "Crater" complained of the dampness resulting from the experiment. So the aqueduct was removed and the "crater" remained till Cole succeeded me and threw the road round it and included it in his garden, at least so I have been told. The next effort to improve the water supply was made by Loch and myself throwing a bund across the valley south of his house. This too was a failure, for as in the first case the water would not stay, but ran away under the embankment. Before I left finally a little water did remain, as the silt filled up the leaks.

The oak trees along the various roads were brought from Champhai, where Loch started a nursery. The first below the Superintendent's house also came from Champhai. The Medical Officer's house and that of the Assistant Superintendent, were also built under my orders. Mr. Cotton (later Sir Henry) had, as Chief Secretary in Bengal, seen how well the system of placing the Public Works under the Superintendent worked in the South Lushai Hills and when he became Chief Commissioner he introduced the system into the North Lushai Hills. The Superintendent was given a Chief Engineer and was granted the powers of a Superintending Engineer. He could sanction works up to Rs. 2,000/-. This enabled me and Loch to work together and I think we made good use of our powers. The Champhai road was traced by Loch, he supplied Sepoys to oversee the labour I provided for its construction. So it was in everything we worked together for the general good. When I went home on leave in 1899, Captain Cole acted for me. He did much for Aijal. The Superintendent's Offices and the Club were of jungle timber, built with punitive labour by

McCabe, but the doors and windows came from Calcutta. I had plans for reconstructing them and told Colt about it. When I came back I found that Cole had removed the old buildings and started stone ones, which had got the plinth level. He had framed no estimate nor had got sanction for the money. He departed. I had to finish the buildings and get the wiggling. Cole was a wonderful chap. He made such a name over the Assam Camp at the Delhi Durbar that he was entrusted with building temporary Delhi with four PWD Executive Engineers under him. He made grand success of the job but he exceeded his estimates by some huge amount and instead of getting slated, received the thanks of the Government of India. He told me how he achieved this. He used to take a plan up to the Head of Department and say, "This is all I can do for you. It is not adequate I know, but I cannot do more for the money; if I had a little more this is what I should like to do for you," showing another plan, "but this will cost a little more". The victim, of course, thought the second plan the best and ended by putting his initials to it. So when the excess over the estimate came out I had their initialled plans to show," said to the astute Cole.

The little tank just below the Superintendent's garden was made by Porteous, but did not hold water. Loch said that if I would empty it, he would get the leak stopped. I said it did not hold water, but did hold a certain amount, and the leak could not be located till it was quite empty. We got some lengths of piping from the waterwork supplies and made a gigantic "dawn-kawn" with which he syphoned off the water. It was muddy and much the colour of Zu and the Lushais crowded round calling out "Mualzavata dawn-kawn" I suppose you know who Mualzavata is, or was.

The District Engineer's house, below the Lungleh road, was only a kutcha erection and has probably disappeared. Hodgkins was the first Engineer, a very competent man who did much good work. It was under him that the Melveng system of road maintenance was brought to perfection.

The Jail, Record Room and Civil Hospital were among the last buildings erected during my stay in Aijal.

The Post Office, when I arrived in Aijal was a most decrepit kutcha erection. The Department refused to find money for a stone building till I sent a photograph of the Office to Shillong that shamed the Department into sanctioning the stone building. There was fire in the building once and an energetic fool handed up a tin of kerosene thinking it was water to a fellow on the roof who threw it over the flames, with no good results.

I think that is about all I remember of the making of Aijal. If you care to ask me any question about other buildings etc., it will be a pleasure to answer it if I can.

BOOK REVIEWS

CHURCHILL : AS A WARLORD

by Ronald Lewin

(Published by B.T. Batsford, London, 1973) PP. 283 Price £ 3.50.

SO much has appeared in print, both as autobiography and biography, on this famous statesman, that it would seem repetitious to attempt to add to Churchilliana. However, Ronald Lewin has taken up the challenge and produced a masterly, critical analysis of Churchill's performance as Prime Minister and Minister of Defence, in Britain's War Cabinet of 1940-1945.

This study, which is unique in the sense that it evaluates Winston Churchill's direction of the war effort during the Second World War, is remarkable in its objectivity and wealth of documentary detail. Ronald Lewin is a scholar of no mean gifts; he has consulted not only published material (the bibliography at the end of his book runs to five pages), but also personalities intimately concerned with decision-making at the time. The result is a brilliant analysis of the course of the War, woven with skill and industry to form a most readable work.

He does not seek to adulate his subject, despite the difficulty of his task for, in the final judgement, Churchill occupies a place of honour amongst national war leaders, however questionable his political philosophy. Nor does he indulge in, what appears now to be fashionable in critical biographies, the deliberate denigration of the man he studies. Churchill's errors, mistakes and foibles are analysed and presented dispassionately; his achievements acknowledged frankly. A biographer would be less than human if, in the process of his research, he were not to form an overall assessment of his subject. Churchill emerges from this study as master of the War scene. Few students of history will doubt his impact on the British war effort, and the astonishing breadth of his vision, which kept not only military leaders but every Government department on their toes, in the discharge of their responsibilities.

Consider his aplomb. Ronald Lewin tells us that "when the Russian Ambassador to Britain, Maisky called on Churchill on 3 July 1940, he asked: 'What will be your general strategy now, after the fall of France?' Churchill, drawing on his cigar, replied with a smile, 'My general strategy at present is to last out the next three months.' That was indeed the case: if England could endure until the September solstice, rough winter weather in the Channel might at least defer invasion until the following spring."

Consider the range of his vision. In a selection from minutes issued by Churchill in the month of June 1940 alone, Lewin culls these unique

examples of the working of this great man's mind : "What progress is being made with rockets and sensitive fuses, with automatic bomb sights and radio direction finding? Can the Navy transfer pilots to Fighter Command? Can Turin and Milan be bombed? What about more felling of timber, to reduce imports and save shipping? Can't more regular troops be brought from India and a better reserve be built up in the Middle East? What is happening about the repatriation of evacuated French force? And their wounded? Why can't civilians be employed on defence works, to release more troops for active defence? The Press must handle air raids in a cool way. I do not think much of the name 'Local Defence Volunteers', I think 'Home Guard' would be better." The list is endless.

The author unfolds the story of Churchill's direction of the war effort with the insight of the historian and the feeling of the biographer. When England was alone, in the war against Hitler, for most of 1940 and 1941, it was Churchill's indomitable spirit, his defiance of the odds, and his unshakeable belief in the outcome of victory, against what he termed in his inimitable way, as 'the tyranny unleashed by this wicked man', that kept the nation grim in its resolve to see the War through. Churchill's decisions in those dark days, in the conduct of the Air War, the campaigns in the Middle East, the War at Sea are all described vividly. Critical judgement, however, is tempered with sympathy for the man who carried a heavy responsibility. Churchill's unique relationship with Roosevelt, which lasted through America's states of non-belligerence and belligerence, is perceptively discussed, as also the reduction in his role as the Supreme Warlord, after America's entry into the war.

This is a book which must be studied carefully to savour its full import. Once begun, it is hard to put down. Its brilliance lies in the painstaking research done by the author, his masterly prose and the intensity of his feeling for his subject. No student of World War II history can consider his studies complete, until he has made the acquaintance of Ronald Lewin's critique of Winston Churchill.

M.L.T.

THE BATTLE FOR BERLIN

by John Strawson

(Published by B.T. Batsford, London, 1974) PP. 182 Price £ 2.60

A MUCH debated topic of strategical discussion, both during the closing stages of the Second World War and subsequently, has been whether or not Berlin should have been General Eisenhower's objective, after the crossing of the Rhine. Field Marshal Montgomery had, indeed, projected this thought much earlier, when the break out from Normandy had commenced. He had referred to the problems of logistics in maintaining several Allied Armies, in simultaneous offensive; the consequential slow rate of progress, and the denial of strategic opportunity. "One powerful, full blooded thrust, with forty Allied Divisions" under his command,

though the Northern flank of the German Armies in France would, Montgomery claimed, see the break up of Nazi resistance, and the end of the War in a matter of weeks. The acceptance of this proposal, which was made in 1944, would have implied a less spectacular role for the American Army Commanders, notably Bradley, whose scope for offensive action would have been reduced, because of the diversion of logistical support to Montgomery. Understandably, this was not acceptable to the Supreme Allied Commander, General Eisenhower. It remains a matter of conjecture whether Montgomery's plan would indeed have succeeded.

The 'ifs' of history offer interesting, if speculative, food for thought. In this most readable book, General Strawson scrupulously avoids conjecture, but leads us through the fascinating sequence of events culminating in the capture of Berlin, the citadel of Nazi resistance, by Russian Armies, under Marshals Zhukov and Konev. The theme of his work is that the capture of Berlin by Allied Armies was not only a military possibility, but a political necessity; a point of view not readily grasped by the politically ingenuous American leadership. The resultant post-War differences amongst the Allies, exemplified by Russian intransigence in the German capital stemmed, in his view, from this faulty understanding. With the benefit of hindsight available to us, it is debatable whether greater understanding and accommodation was indeed possible between two such widely opposed ideologies.

General Strawson is not only an accomplished writer, but also a distinguished soldier. He served in the War in Winston Churchill's old regiment, the Fourth Hussars, and has held important command and staff appointments since. His interpretation of the military situation, therefore, commands respect. He narrates the story of the Battle for Berlin succinctly, never permitting the reader's interest to flag. He has studied his subject with care and in depth; he gives us both the Soviet and the Allied accounts, dispassionately, and in most readable form.

A soldier, scholar and philosopher, John Strawson ends his book with an interesting comparison between the political and military acumen of Frederick the Great and Adolf Hitler. The reader is left in little doubt as to their respective standings in history.

This is a thoroughly stimulating and informative book, of interest both to the military student and the historian, well illustrated and documented with maps. The young regimental officer will find this work of particular interest; there are first hand battle accounts at his level, which will hold his attention. If the soldier needs a sense of history, this book surely helps to develop it.

M.L.T.

THE ARAB GUERRILLA POWER, 1967-1972

by Edgar O' Ballance

(Published by Faber and Faber, London, 1974) PP. 246 Price £ 4-50

GUERRILLA warfare, although not unfamiliar to the past history of mankind, has become a common phenomena in the recent times especially in the underdeveloped region. Even it has become an

alternate means of capturing power from an oppressive regime. For the successful operation of guerilla activities, the geopolitical location of a country is quite important. Moreover, when people are oppressed for long and have no opportunity of redressing their genuine grievances by constitutional methods, they may take recourse to armed insurgency. Major Edgar O'Ballance, who had the opportunity to study guerilla activities from a close circle, having extensively observed the Civil War in Greece, the Indo-China War, the war in the Yemen and the Third Arab-Israeli War, makes a modest attempt to study the liberation movement by the Palestine guerillas.

In the preface itself, the author makes a sweeping observation on Nasser's role when he writes, "Arab guerilla power had been supported and kept viable by Nasser who tried to use it to divide and influence Arab States" (p. 12).

Beginning his observation on the cult of Fedayeen which means 'self sacrifice' or sometime translated as 'men of sacrifice' (p. 19), he gives a detailed account of all guerilla organisations like Arab Liberation Front (ALF), Palestine Liberation Army (PLA), Palestine Liberation Organization (PLO) and many others. He makes a chronological study of their activities like surprise attack and murder, hijacking, use of letter bomb, taking hostage, etc. He emphasizes the importance of Fatahland, a small guerilla stronghold with an area of 20-50 square miles located in Southern Lebanon. The Palestine guerillas, who belonged to the Fedayeen group, organised themselves there in the broken country of Mount Hermon foothills, to the east of Hasbani river (p. 19).

In his concluding chapter, he makes certain sharp observations on the apathy of Arab States, the weakness of the leadership in the number of splinter groups among the guerillas, and the lack of sympathy by any super power in their movement. He is rather pessimistic about their future role. The major weakness of the author lies in the fact that as an outsider he lacks insight into the various problems that the guerillas face and naturally his observations are only superfluous and journalistic.

P. K. M.

LUFTWAFFE AIR CREWS—Battle of Britain 1940

by Brian L. Davis

(Published by Arms and Armour Press, London) PP. 32 Price 95p.

THE publication is more of an illustrated brochure of 32 pages. It is neatly printed on thick glazed quality paper with pleasing get-up. The photographs in black and white colour, of uniforms and equipment are pretty good.

This 4th guide or volume is one of the series of Key Uniform Guides prepared under the guidance and editorship of Mr. Brian L. Davis, the

renowned author of a best-selling book viz., *German Army Uniforms and Insignias 1933-45*.

History of Luftwaffe, constituted in the spring of 1935, upto 1945 is lucidly covered in the first few pages of the brochure. Pointed attention is drawn to General Lieut Wever, the First Chief of the German Air Staff. To meet the strategic requirement of centrally placed Germany, he aimed at having a fleet of long-range heavy Bombers to be able to strike at any corner of Europe at will! But with his death, near Dresden in an aircrash on 3rd June 1936, died his policy to raise a heavy bomber fleet.

His successor Albert Kesserling, in consultation with Goring, decided to concentrate on Fighters, Dive-Bombers and Medium-Bombers in preference to Wever's heavy four-engined bombers. With hind-sight, it can now be safely said that Wever's plan, if allowed to materialise, in all probability, might have saved the situation in the Battle of Britain in 1940. It all poignantly alludes to the fact as to how at times death/disappearance of one individual can change the outcome of battles of future and consequently the course of history.

The Battle of Britain has been described at some length. The conclusion that Luftwaffe lost ignobly the Air Battle over Britain despite its overwhelming superiority in number of aircrafts, due to serious mistakes on the part of German Reich, is not based on facts. In arriving at this conclusion, the part played by "ULTRA" seems to have been overlooked. With reliable information now available about the significant part played by "ULTRA", it would be unfair to attribute Luftwaffe's defeat to the superiority of Royal Air Force. "ULTRA" had been supplying RAF detailed information in advance, of the impending raids by Luftwaffe which provided RAF ample time and opportunity to change its tactics and strategy for each raid.

Uniforms of Luftwaffe have been displayed but not much of equipment has been shown effectively except for the distant views of the aircrafts. Uniforms of Luftwaffe by any standard are grand and impressive. The Royal Air Force Uniforms, though utilitywise superior in certain aspects, did not match the splendour and grandour of Luftwaffe's outfits. Their 3 Styles of flying helmets had a definite edge over that of RAF's.

Each item of Uniform like shirts, black ties, trousers, breeches, Juncers, flying suits, flying helmets, life jackets, goggles, Officers' high boots and sleeping bags have been reasonably well illustrated. In some cases, in a maze of photographs (pages 14-15 and 22-25), numerous items are shown, which fail to give clear idea and concept of the item. The German National Emblem 'Swastika' is displayed on head dresses. Enlarged photographs or those taken from near would provide better display. The photographs of 4 Generals on page 9 could have been well utilised to illustrate some items of Officer's uniforms. On page 30, effort has been made to show Summer Weight Flying Suits, but the Pilots sitting hustled in the cockpit hardly give a clear idea aimed at. Again, individual photographs would serve the purpose better than group photographs.

In the brochure, emphasis seems to be more on the war pictures,

which no doubt are important in their own right, but is perhaps not exactly in keeping with the objective of the publication.

Tuchrock or the Service Tunic, in use practically with all formal and informal uniforms alike, seemed to be pretty popular. The electrically heated flying suit, though not much popular due to the restricted movements that it imposed, was a definite advance over RAF Uniforms. The German Flying Jerkin, better known as Wind-Cheater with zip, was very popular with the Fighter Pilots. Inclusion of Officers' White Summer Dress, Special Tunics for Generals, and the other formal and informal dresses mentioned in passing, but not illustrated, would have been a welcome addition than exclusion on purpose. These would have lent further colour to Luftwaffe's glamorous uniforms.

Such volumes are valuable for the students of history. These enable them to assess plus and minus points of particular uniforms. Every aspect of uniforms, equipment, badges and insignias can be studied against the historical background leading to their origin and subsequent evolution, which gives an insight on the traditions and conventions besides various other characteristics of a formation. Importance of this factor is not yet fully realised.

A fine brochure indeed, with ample scope for improvement, to make it purposefully illustrative aimed at better utility.

M. S.

THE MUSLIMS OF BRITISH INDIA

by P. Hardy

(Published by Cambridge University Press, London, 1972) PP. 306 Price £ 4-90.

MUSLIMS constitute a sizable population in the Indian subcontinent. Since Mahmud of Ghazni's invasion and plunder of Somath temple in the eleventh century A. D. until the region of the Mughuls, they have spread to all the regions in South Asia. In course of their stay for more than a thousand years, they have not only influenced the social, political and cultural life of this region but in turn have been greatly influenced themselves. Until the British came to India, the Muslims enjoyed enormous powers in India as the ruling elites and continued to think themselves as the master race. Naturally, with the advent of British rule, they were the first to revolt in order to reassert their suzerainty in this country. Being very much conscious of their own cultural identity, they were hostile to any new changes introduced by the British. Because of their isolation and non-cooperation, they remained backward, whereas the Hindus could assimilate and readjust themselves to the new cultural values and advance on the path of progress.

P. Hardy, with the insight of a historian and keen observer of the South Asian region, herewith presents to the readers a painstaking study. Before

writing this book, he has not only spent valuable hours in the British Museum and the India Office Library, but also cross-examined a number of leaders, intellectuals and administrators in Great Britain, Pakistan and India. He has collected many interesting data on the composition, life style and occupational background of the Muslims in India.

In his initial chapters, he throws light on the advent of the crescents in the subcontinent and their struggle for power until the arrival of the British. He proceeds to analyze their mental attitude and initial reaction to the British rule especially in the light of the first liberation war in 1857. The development of community consciousness in them takes root, as the author rightly points out, only during the British rule. By examining the official records and private papers of British statesmen and leaders of the subcontinent, he comes forward with certain findings about the gradual entry of Muslims into the mainstream of political life in India. His diagnosis of the partition of India in the last chapter is at times provoking and needs to be examined more objectively. He deserves a special mention of the six maps at the end, which show the representation of muslim power before and during British rule and a bibliography of the contemporary writings in Europe.

P.K.M.

THE THREE WORLDS OF CAPTAIN JOHN SMITH

by Philip L. Barbour

(Published by Macmillan, London, 1964) PP. 533 Price Sh. 36/-.

ON Saturday, January 9, 1580, a rural English couple took their first born son to the parish church to be baptised. Intentionally, the father baptised his son under the most anonymous of English names.

However, the boy grew up to become one of the great legends of his time—a time in itself overcrowded with his type of legends. His life passed through almost every experience that the sixteenth century world could offer. He was John Smith the Adventurer, John Smith the Colonist and John Smith the Promoter. He took a living part in just about every historical event in his lifetime.

These then were the three (in fact, many) worlds of John Smith. Reading about his life one should begin to think "this is the kind of life I would have liked to live". A book on his life should hold one's attention as much as any of the thrillers being published today

This is unfortunately what Mr. Barbour has not tried to do. The major bulk of this voluminous piece is more or less like a scholar's thesis (under which guise it would definitely be more acceptable). Exciting periods of Captain John Smith's life are made extremely clinical by lengthy analysis of old shreds of information like whether John Smith boarded a certain ship on a Saturday or a Friday. Footnotes lead on to more footnotes till the original asterisk is forgotten. The details are elaborate and still remain unclear in portions.

There are other books and bibliographs of John Smith. For a reader who has not heard of John Smith before, this is not the best book to start on.

M.R.

SECRETARY'S NOTES

SUBSCRIPTION

THE subscriptions are based on a calendar year and are due for renewal in the 1st week of Jan each year. Members and subscribers are, therefore, advised to make these annual payments without waiting for reminders.

The Council of the Institution has increased the annual subscription for ordinary members to Rs 15/- and for subscribers (institutions, units, messes) to Rs 40/- wef 1 Jan 75. This has been necessitated due to increase in the production cost of the Journal and prices of the library books.

Some ordinary members have given standing instructions to their bankers to remit the subscription to our bankers in Jan each year. The banks have remitted, as in the past, only Rs 10/- as the membership subscription for the current calendar year. Such members are requested to advise their bankers of the revised subscription rates with the specific instructions to remit :—

- (a) a further amount of Rs 5/- immediately to complete the membership subscription for 1975
- (b) Rs 15/- every year in future

Please also notify your membership number of the Institution to your bankers with the request that the same should be quoted by them at the time of remitting the annual subscription to our bankers. This will ensure correct posting in our ledgers, because in many cases there are more than one officer bearing the same name.

CHANGE OF ADDRESS

There are still many instances of members going on transfer failing to inform us of their whereabouts. It is important that members and subscribers notify any change of address to the Secretary's Office.

NEW MEMBERS

From 1st January 1975 to 31st March 1975, the following members joined the Institution :—

AGNIHOTRI, Captain S.	CHAUHAN, Captain HARJIT SINGH
AHMED, FLT LT IRFAN	CHAUHAN, Major M. S.
AHMED, Major SAYED	CHAUHAN, Major V. P. S.
AJIT SINGH, Captain	CHHILLAR Captain S. B.
AMAR SINGH Supahia, Captain	CHOWLA, Major P. R.
AMRIK SNGH, Captain	DAHIYA, Fg Offr J. C.
ANAND, Captain DEEPAK	DAHIYA, Captain S. K.
ANAND DOKA, Captain	DAS, Captain S. K.
ANTIA, Major P. P.	DASS, Captian M.
ARORA, Major A. C.	DATTA, Flt Lt D. K.
ARUN PRAB, Flt Lt	D'MONTY, Captain R. W.
ASHOK KUMAR, Captain	DESAI, Major J. M.
AULAKH, Major S. S.	DESHMUKH, Major G.
BAIDWAN, Major H. S.	DHALIWAL Ex-Major G. S.
BAINS, Captain B. M. S.	DHINGRA, Major A. S.
BAJAJ, Major V. K.	DHIR, Major RAKESH
BAJWA, Major S. S.	DHIR, Major V. K.
BALAKRISHNAN, Major K.	DHUPAR, Captain B. K.
BALBIR SINGH, Captain	DUGAL, Flt Lt A. S.
BALI, Captain KEWAL	DUGAL, Major KANWALJIT SINGH
BALLIAPPA, Captain P. C.	DUTTA, Captain N. C.
BALWANT SINGH, Captain	GADAKAR, Captain M. S.
BATRA, Major R. K.	GANESAN, Flt Lt R.
BHAGAT, Flt Lt R. N.	GARG, Fg Offr HARSH
BHANDARI, Captain MOHAN	GEORGE, Major K.
BHATIA, Captain V. K.	GEORGE, Flt Lt K. V.
BHATIA, Major Y. P.	GHANARA, Captain H. L.
BHATNAGAR, Captain S. P.	GHANDHARB SHAH SINGH, Captain
BHIDE, Major D. B.	GHOGALE, Captain P. T.
BHUP SINGH, Major	GHOSH, Major S.
BISHT, Major G. S.	GHOSH, Captain SUBIR
CHADHA, Captain R. P.	GHOSHAL, Captain R. N.
CHAKRAVARTHI, Flt Lt S. K.	GILL, Major A. S.
CHAND, Flt Lt K.	GILL, Captain H. S.
CHANDEL, Flt Lt B. S.	GILL, Major NIRMAL
CHATHRATH, Captain M. L.	GILL, Captain R. S.
CHATURVEDI, Captain R. P.	GOEL, Captain R.
CHAUDHRY, Sqn Ldr D. S.	GOPALAKRISHNAN, Flt Lt S.

- GOPALAKRISHNAN, Captain T. V.
 GOSWAMI, Flg Offr A. K.
 GOVIND RAJ Flg Offr V.
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